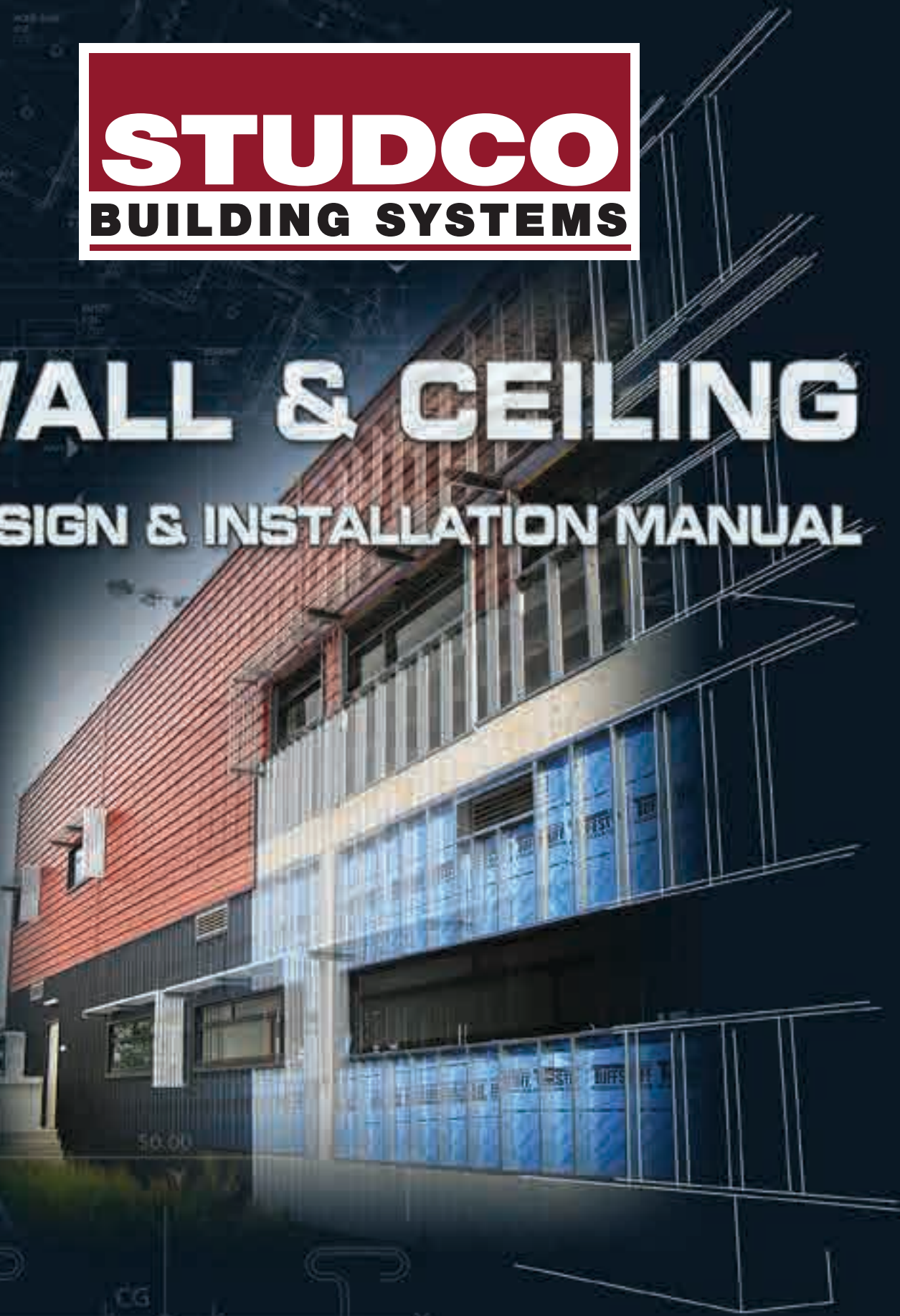




WALL & CEILING

DESIGN & INSTALLATION MANUAL



VOLUME 3.2

LEADERS IN INNOVATIVE BUILDING PRODUCTS

STUDCO

BUILDING SYSTEMS

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Customer Service Hotline
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AUSTRALIA

Studco Australia Pty Ltd

ABN 39 145 053 925

Head Office:

130-140 Merrindale Drive
Croydon South VIC 3136

T: (03) 9737 2500

F: (03) 9737 2555

E: sales@studcosystems.com.au

W: www.studcosystems.com.au.au

Manufacturing and Distribution:

130-140 Merrindale Drive
Croydon South VIC 3136

UNITED STATES OF AMERICA

Studco Building Systems US LLC

1700 Boulter Industrial Parkway
Webster 14580
USA

Phone: int+ 1 800.675.8023

Fax: int+ 1 585.545.3010

Email: sales@studcosystems.com

www.studcosystems.com

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GENERAL

The information and design tables contained in this manual are for the design of steel stud framed walls and ceiling systems and can be used for the selection of appropriate sections to be used in external or internal load bearing or non load bearing applications in residential, commercial or industrial buildings.

This manual does not include fire or sound acoustic ratings. These are covered by various building board manufacturer's specifications and individual tests.

All available sections are manufactured from high quality hot dipped zinc coated steel accurately roll formed to the specified dimensions to provide a consistent, reliable framing material for a range of applications including wall, ceiling and roof framing, bulkheads, fascias and many other applications.

Zinc coated steel is light and easy to handle and fix, has reasonable corrosion protection and is immune from biological attack in all its forms. Where severe corrosive conditions prevail, extra precautions will be required to ensure the life of the product. Consult Studco Building Systems under these circumstances.

All material supplied is accurately cut to specified lengths eliminating the necessity for site cutting. Wall Studs are supplied with 25mm diameter flared holes at approximately 600 centres for the installation of electrical and hydraulic services, thus minimizing on site labor for all sub trades.

DISCLAIMER

The information, charts and tables included in this manual have been prepared for use of Studco and their customers and clients and relate to the products manufactured by Studco. The information can not be assumed to apply to similar products of other manufacturers.

Any mixing of different manufacturer's products within a system will void all Guarantees. Studco Australia Pty Ltd will not be responsible for the structural performance of any structure designed using these tables and applied to products not manufactured by Studco Australia Pty Ltd. Any specifications and design criteria should be confirmed by the project engineer prior to installation.

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STUDCO BUILDING SYSTEMS have been certified to the ISO 9001:2008 Quality System and the ISO 14001:2004 Environmental Management System.

*Your quality is assured because
we are a certified company*



STANDARDS

The design tables, section properties, installation details and test data contained within this design and installation manual have been formulated in accordance with the following Australian, New Zealand and International standards.

AS/NZS 4600:2005

Cold formed steel structures

AS/NZS 1170:2002

Structural design actions
Part 0: General principles
Part 1: Permanent, imposed and other actions
Part 2: Wind actions;

Building Code of Australia (BCA 2009)

Volume 1 Section B Structure
Volume 2 Section 2.1 Structure

AS/NZS 2785:2000

Suspended Ceilings – Design & Installation

The products and systems manufactured by Studco Building Systems are warranted to be free from defects in material and workmanship if installed in accordance with Studco's recommendations and Building Board manufacturer's recommendations.

("the Customer")

TO: _____
PROJECT: _____
DATE: _____
WARRANTY REFERENCE NO: _____

Warranty

Studco Building Systems Pty Ltd ("Studco") warrants that all components manufactured by Studco for use in the Studco wall and ceiling components ("the Studco System")

- are designed and conform to Australian Standards -
 - AS 1397 Steel Sheet and Strip - Hot dipped zinc-coated and aluminium/zinc-coated
 - AS 4600/1538 Cold Formed Steel Structures Code
 - AS 1170.1 Loading Code - Dead and Live Loads
 - AS 1170.2 Loading Code - Wind Forces
 - AS 1250 Steel Structure Code
 - AS 4100 Steel Structures - Design and Installation
 - AS 2785 Suspended Ceiling Design and Installation
- are free from defects in material and workmanship.
- If any time period is specified in the date of this warranty when the Studco System is designed and installed in accordance with the Building Board manufacturer's recommendation if any Studco System component fails to meet these warranties Studco shall at its sole discretion either (subject to any applicable law):
 - substitute the defective component; or
 - provide an equivalent substituted component; or
 - fix the defective components or pay the cost of fixing those components; or
 - pay the cost of substituting the defective component or of acquiring the equivalent substituted components.

But Studco shall not be liable for any special consequential direct or indirect loss or damage or harm or injury suffered as a result of such defect to the extent permitted by law of the Customer or any person claiming through the Customer.

The Customer acknowledges that the steel material is not manufactured by Studco the warranty of the manufacturer of the material (if any) shall be accepted by the Customer and is the only guarantee given to the Customer in respect of the material.

This Warranty shall be invalidated by Studco where:

- installation of the Studco System component is not in accordance with Studco's recommendations, installation or specifications as published and directed at the time of the warranty; or
- the Studco System components are installed in locations exposed to moisture, humidity or corrosion or corrosive material or other destructive substances; or
- the Studco System incorporated any components not manufactured or approved by Studco; or
- Studco has not been paid in full for the Studco System components supplied; or
- any variation, alterations or additions have been made to the Studco System which have not been approved in writing by Studco; or
- the Studco System has not received maltreatment, inattention or interference; or
- the defect has not arisen solely from faulty material or workmanship; or
- there has been inadequate or improper maintenance of the Studco System; or
- there has been inadequate or implied warranties, guarantees and conditions under Statute or general law as to merchantability, description, quality, suitability or fitness of the Studco System for any purpose or as to the design, assembly, installation or material or workmanship or otherwise are hereby expressed excluded to the full extent permitted by law and Studco shall not be liable for any physical or financial injury, loss or damage or for any consequential loss or damage of any kind arising out of the supply and layout, assembly, installation or operation of the Studco System in any way whatsoever.

Executed by an authorised person of the Customer: _____ Dated: _____
Name: _____ Position: _____

R.E.Proud & Associates Pty. Ltd.
Civil and Structural Engineers
Ballarat and Tasmania

14 Victoria St, Ballarat, 3350
P.O.Box 2125 Bakery Hill, Vic, 3354
Ph: 03 5327 7477 Fax 03 5327 7488
Email: rpa@meridianalliance.com.au



Civil & Structural Engineers, Surveyors and Planners

Level 2, 45 - 47 Rooke St, Devonport, 7310
P.O.Box 752 Devonport, Tas, 7310
Ph: 03 6424 1611 Fax: 03 6423 1131
Email: meridian_tas@bigpond.com

18-June-2009

To Whom it may Concern

This is to certify that the Various tables, charts and section properties for cold formed steel sections for steel wall and ceiling framing systems presented in the STUDCO Design Manual have been prepared by the undersigned in accordance with the provisions of the the following Australian Standard Codes (Subject to conditions and limitations stated therein).

| | | |
|---------------------------------|------|---|
| BUILDING CODE OF AUSTRALIA 2009 | | |
| Volume 1 Section B Structure | | |
| Volume 2 Section 2.1 Structure | | |
| AS/NZS 1170 | | Structural Design Actions |
| Part 0 | 2002 | General Principals |
| Part 1 | 2002 | Permenant, imposed and other |
| Part 2 | 2002 | Wind Actions |
| AS/NZS 1170 | | Minimum Design Loads on Structures |
| Part 1 | 1989 | Dead and Live Loads and load Combinations Incl Amdt 1 Jan 1993 |
| Part 2 | 2002 | Wind Loads Amdt 1 Amdt 2 Amdt 3 |
| AS 4100 - 1998 | | Steel Structures Code |
| AS/NZS 4600 - 2005 | | Cold Formed Steel Structures code |
| AS 4055 - 2006 | | Wind Loads for Housing |

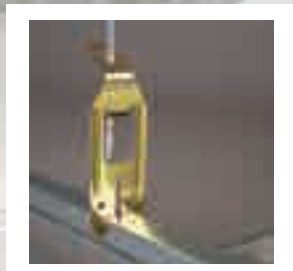
Ross Proud
Dip CE MIEAust, CPENG
NPER 78086
Registered Building Practitioner State registrations
Victoria EC1039
Queensland RPEQ 7601
Tasmania CC1406U
Northern Territory 56121 ES

Concealed Ceiling Systems



M27R Top Cross Rail

Can be rolled to create curved ceilings.



M534 Spring Hanger

Used for suspension of concealed ceiling systems



MBF Betafix Clip

For adjustment when fixing furring channel



M39 Locking Key

Primary coupling with unique thumb push tab providing ease of installation.



M520 Side Mount Spring Hanger

TCR suspension clip ideal for use in confined areas.



M534 Spring Hanger

With fixing holes for preliminary suspension of bulkheads and floating ceilings.

Concealed Ceiling Systems

The Studco Concealed Ceiling System is engineered to provide designers and installers with a flexible and secure system for a building board flush finish. Components are manufactured from galvanised steel, designed for safe handling, and easily clipped together to form gridwork where building boards can be simply fixed. Components such as battens, furring channels and top cross rail allows for a range of loading options and ceiling spans. Furring channel track reduces the need for suspended fixing at each end of the ceiling. For curved ceilings, top cross rail can be easily curved in either direction to various radii. Studco Concealed Ceiling Systems can be used for non-fire-rated or fire-rated applications and have been designed to meet the relevant Australian standards.

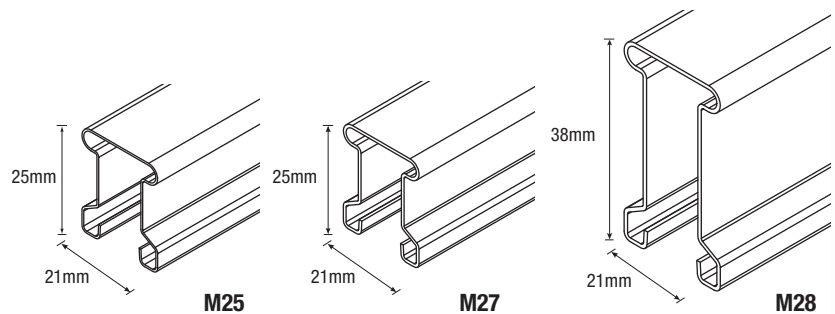
Components

Top Cross Rail

Table 1

| PART No | DESCRIPTION |
|---------|-------------------------------|
| M25 | 25mm Top Cross Rail 0.55BMT |
| M27 | 25mm Top Cross Rail 0.75BMT * |
| M28 | 38mm Top Cross Rail 0.75BMT |

* Available as a radius section



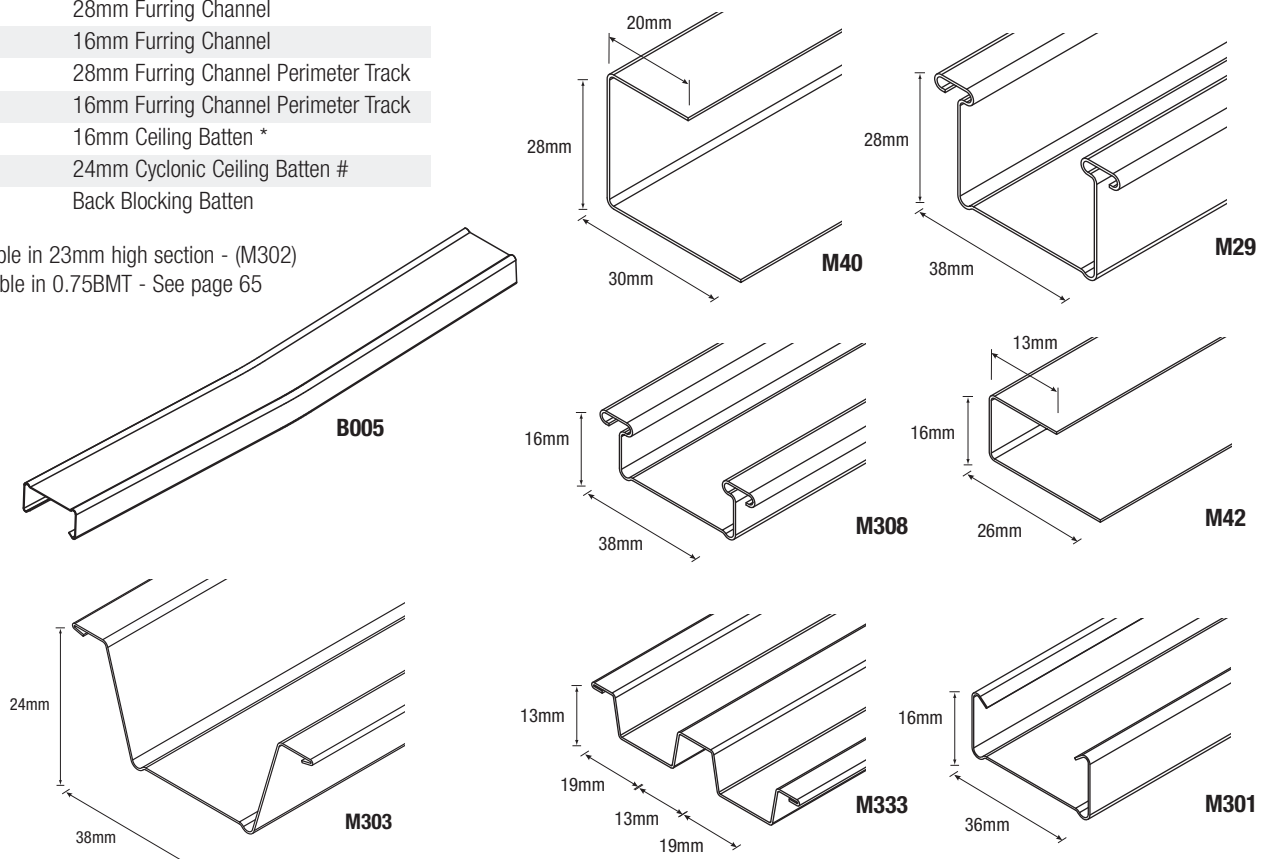
Furring Channel, Wall Track and Batten

Table 2

| PART No | DESCRIPTION |
|---------|--------------------------------------|
| M29 | 28mm Furring Channel |
| M308 | 16mm Furring Channel |
| M40 | 28mm Furring Channel Perimeter Track |
| M42 | 16mm Furring Channel Perimeter Track |
| M301 | 16mm Ceiling Batten * |
| M303 | 24mm Cyclonic Ceiling Batten # |
| B005 | Back Blocking Batten |

* Available in 23mm high section - (M302)

Available in 0.75BMT - See page 65

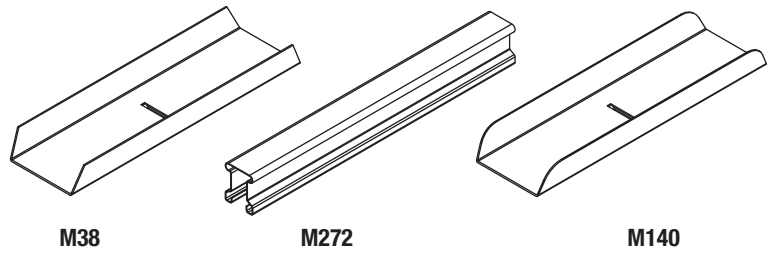


Concealed Ceiling Systems - Components

Section Joiners

Table 3

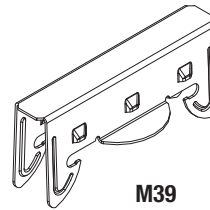
| PART No | DESCRIPTION |
|---------|--------------------------|
| M38 | M29 Joiner |
| M272 | M27/M25 Top Cross Joiner |
| M140 | M301 Batten Joiner |



Primary Couplings

Table 4

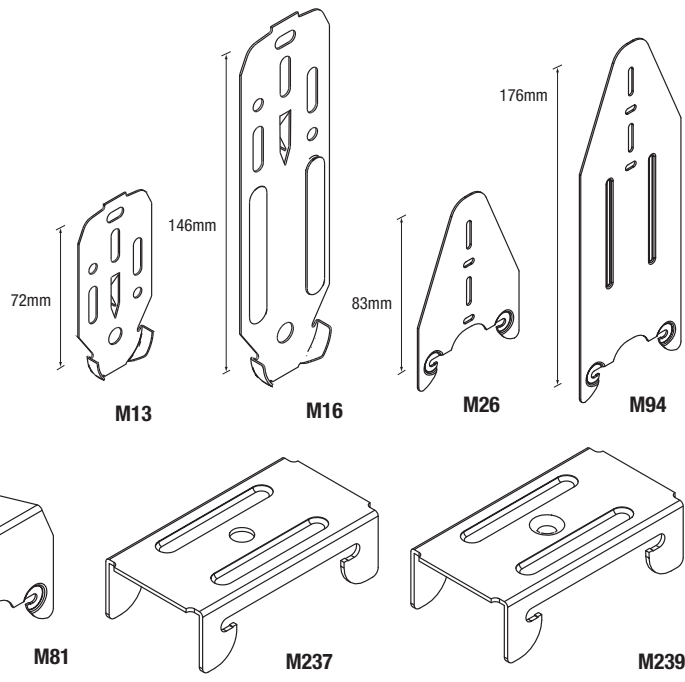
| PART No | DESCRIPTION |
|---------|---------------------------------|
| M39 | M29/M308 to M27/M28 Locking Key |



Direct Fix Clips

Table 5

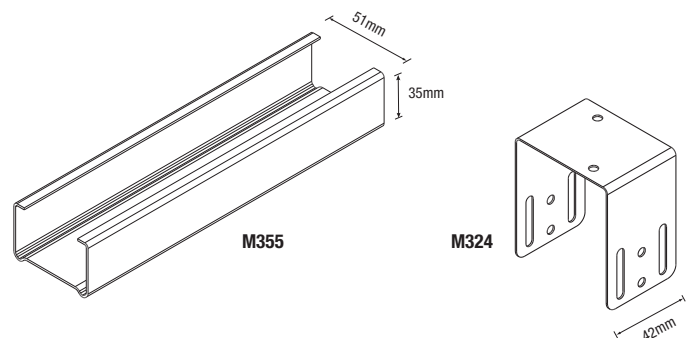
| PART No | DESCRIPTION |
|---------|-----------------------------------|
| M13 | M301 Direct Fix Short |
| M16 | M301 Direct Fix Long |
| M80 | M301 Direct Fix Wall Clip |
| M26 | M29/M308 Direct Fix Short |
| M94 | M29/M308 Direct Fix Long |
| M81 | M29/M308 Direct Fix Angle Bracket |
| M237 | M29/M308 Wall Clip |
| M239 | M29/M308 Wall Clip Threaded M6 |



Slimceil Components

Table 6

| PART No | DESCRIPTION |
|---------|-------------------------------------|
| M355 | M355 Ceiling Channel 0.5mm |
| M324-2 | Slimceil Ceiling Bracket 37-60mm * |
| M324-4 | Slimceil Ceiling Bracket 53-76mm * |
| M324-6 | Slimceil Ceiling Bracket 69-92mm * |
| M324-8 | Slimceil Ceiling Bracket 85-108mm * |



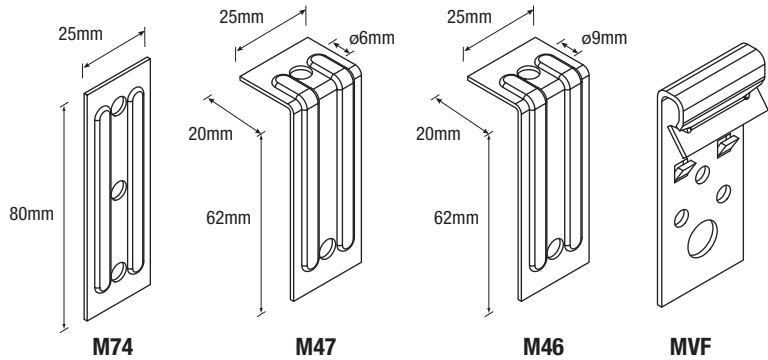
* Distance from concrete substrate to back face of plasterboard lining

Concealed Ceiling Systems - Components

Direct Fixing Clips

Table 7

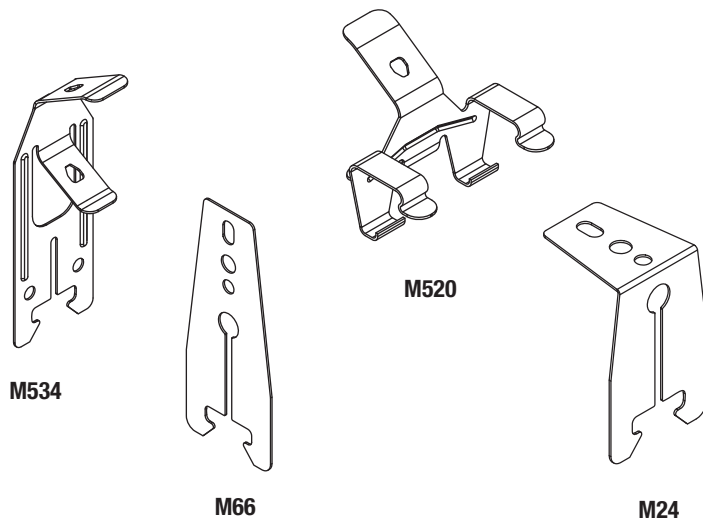
| PART No | DESCRIPTION |
|---------|-------------------------|
| M74 | Rod Bracket |
| M47 | Right Angle Rod Bracket |
| M46 | Right Angle Rod Bracket |
| MVF | Purlin Clip |



Primary Suspension Clips

Table 8

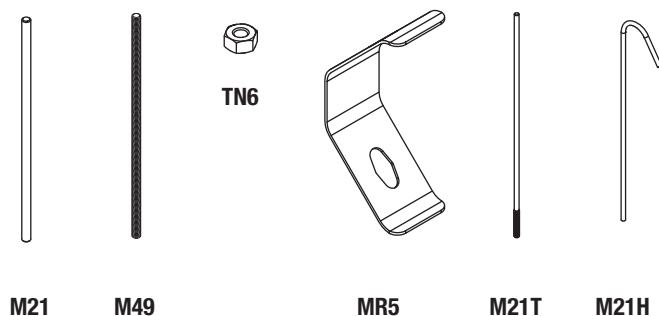
| PART No | DESCRIPTION |
|---------|--------------------------------|
| M534 | M27/M28 Spring Hanger |
| M520 | M27 Side Mount Spring Hanger |
| M66 | M27/M28 Direct Fix |
| M24 | M27/M28 Direct Fix Right Angle |



Suspension Rod

Table 9

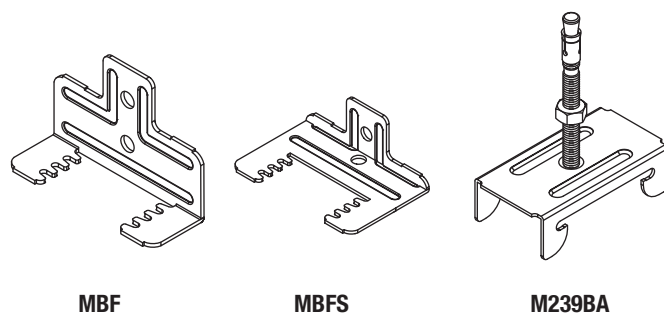
| PART No | DESCRIPTION |
|---------|-----------------------------------|
| M21 | 5mm Galvanized Rod |
| M49 | 6mm Threaded Rod |
| TN6 | 6mm Zinc Nuts |
| MR5 | M21 Rod Joiner |
| M21T | 5.2mm Galvanized Rod w/M6 Thread |
| M21H | 5mm Galvanized Rod Hooked one end |



Adjustable Clips

Table 10

| PART No | DESCRIPTION |
|---------|-------------------------------------|
| MBF | M29/M308 Adjustable Direct Fix |
| MBFS | M29/M308 Adjustable Direct Fix Long |
| M239BA | M29/M308 Direct Fix with Tru Bolt |



Installation Guide - Direct Fix Ceilings

The Studco Concealed Ceiling System has a range of options for direct fixing of battens and furring channels in ceiling applications (as shown in Fig 1). The maximum ceiling drop should not exceed 180mm. A greater drop than 180mm requires the Studco Suspended Ceiling System. Direct Fixing clips must be fixed along the furring channel or batten sections in accordance with the relevant maximum ceiling span tables. A minimum of two fasteners must be used per clip. The temporary holding tab can be used as a non permanent fixing for ease of installation when fixing to timber beams. Also there must be a minimum clearance of 2mm to the underside of the joist (as shown in Fig 1). The Furring Channel or Batten sections should be spaced in accordance with the building board manufacturer's recommendations. It is not recommended to screw or nail fix battens or furring channels directly to a joist supporting a trafficable floor due to deflection of the joist occurring and possible subsequent interaction with the ceiling batten.

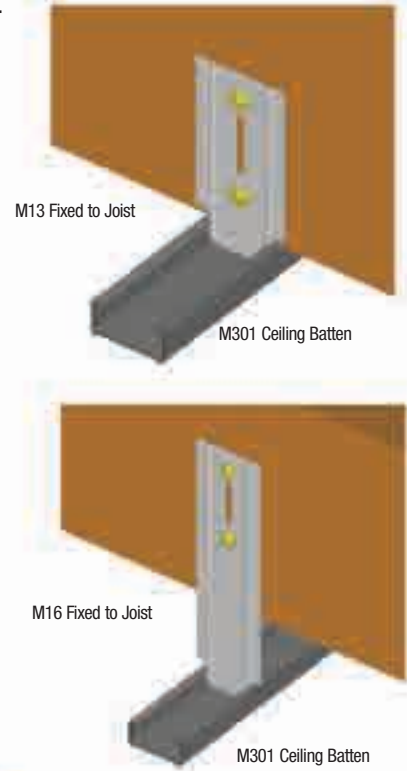
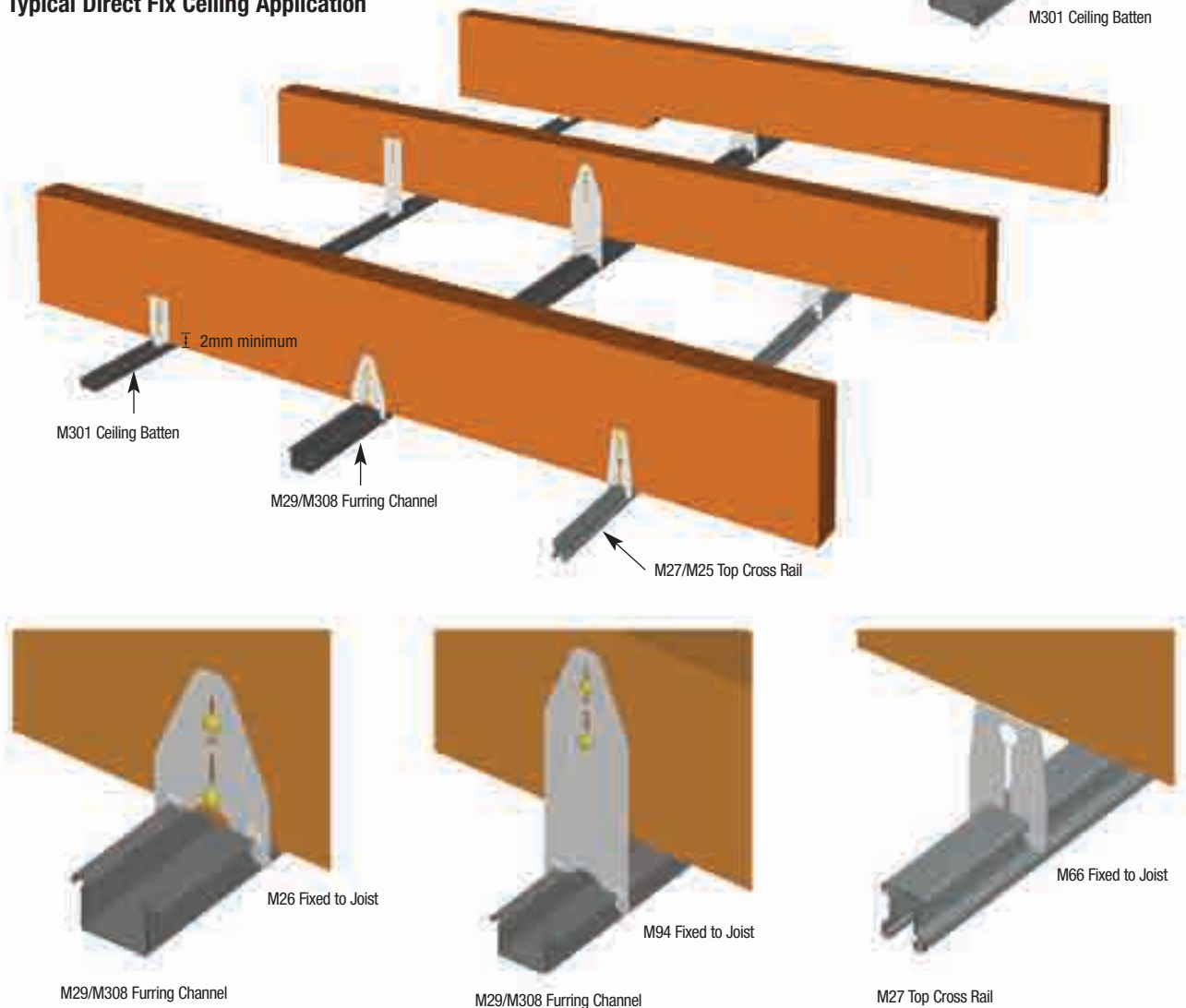


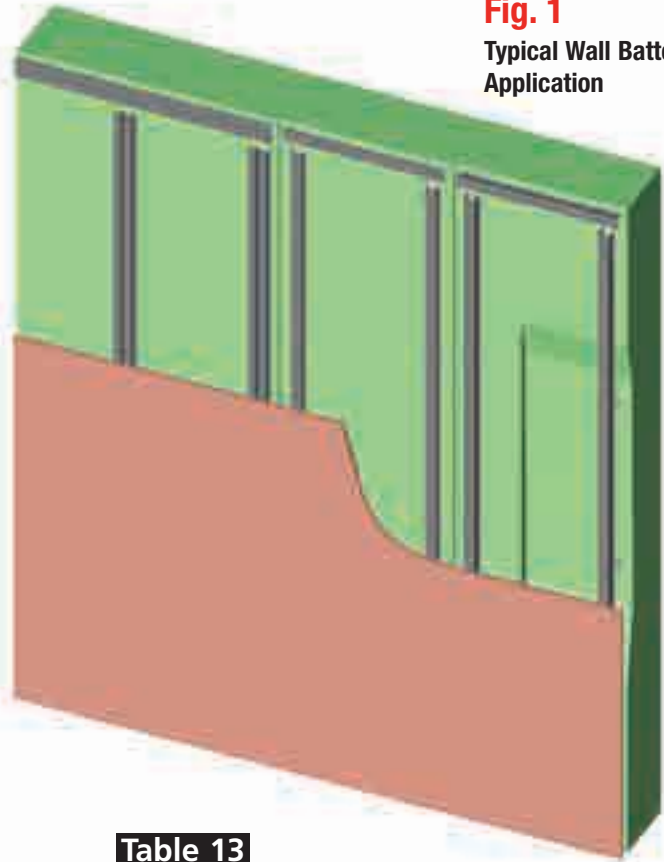
Fig. 1
Typical Direct Fix Ceiling Application



Installation Guide - Direct Fix Ceilings and Walls

The Studco furring channels and battens together with the range of direct fixing clips are the most effective way of battening out of irregular walls in preparation for the fixing of the building boards. A combination of direct fix and adjustable clips may be used. (See Fig. 1). Adjustable clips can offset irregular surfaces up to 50mm (as shown in Fig. 2). Anchors should be selected in accordance with the manufacturers recommendations. Anchors should be spaced in accordance with Table 12.

Fig. 1
Typical Wall Batten Application



Concealed Ceiling Systems

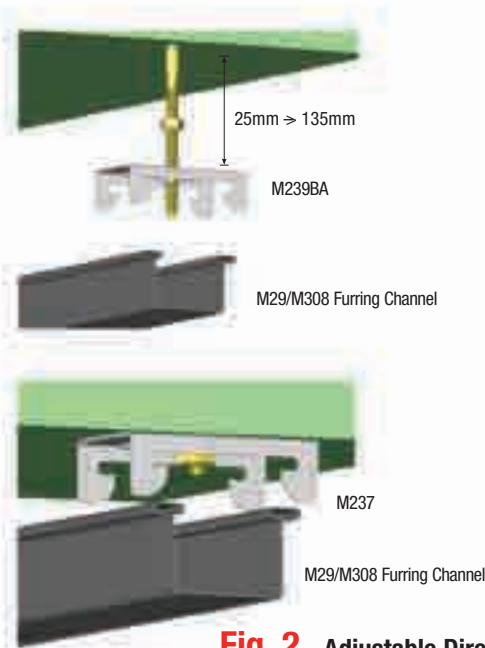
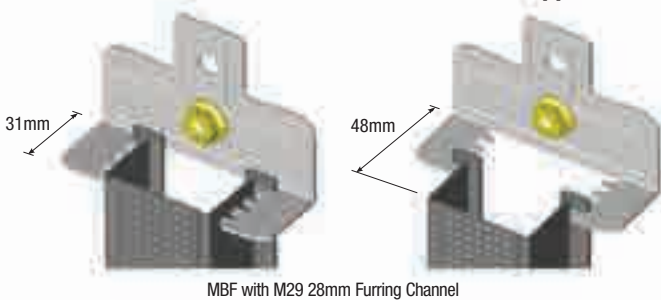


Fig. 2 Adjustable Direct Fix Clips - Wall Batten Application

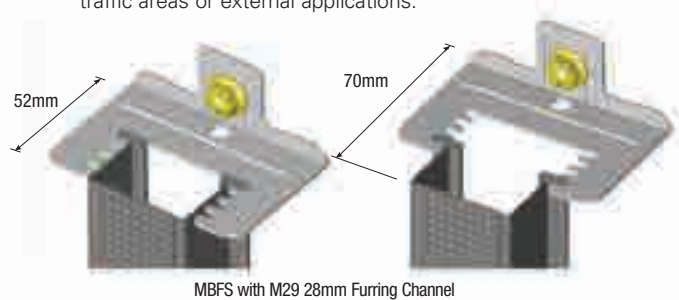
Table 13

| MAXIMUM ANCHOR SPACING | |
|------------------------------------|----------------|
| FURRING CHANNEL | ANCHOR SPACING |
| M333 13mm Recessed Furring Channel | 900mm |
| M29 28mm Furring Channel | 1200mm |
| M308 16mm Furring Channel | 900mm |

Note: The above spacings may not be suitable for high traffic areas or external applications.



MBF with M29 28mm Furring Channel



MBFS with M29 28mm Furring Channel

Table 11

| MAXIMUM POSITION | | |
|----------------------------|---------------------------|---|
| ADJUSTABLE DIRECT FIX CLIP | FURRING CHANNEL | MEASUREMENT rear of clip to face of furring channel |
| MBFS | M29 28mm Furring Channel | 70mm |
| MBFS | M308 16mm Furring Channel | 58mm |
| MBF | M29 28mm Furring Channel | 48mm |
| MBF | M308 16mm Furring Channel | 36mm |

Table 12

| MINIMUM POSITION | | |
|----------------------------|---------------------------|---|
| ADJUSTABLE DIRECT FIX CLIP | FURRING CHANNEL | MEASUREMENT rear of clip to face of furring channel |
| MBF | M308 16mm Furring Channel | 19mm |
| MBF | M29 28mm Furring Channel | 31mm |
| MBFS | M308 16mm Furring Channel | 40mm |
| MBFS | M29 28mm Furring Channel | 52mm |

Installation Guide - Suspended Ceilings

Concealed Ceiling Systems

Fig. 1 Furring Channel Joiner

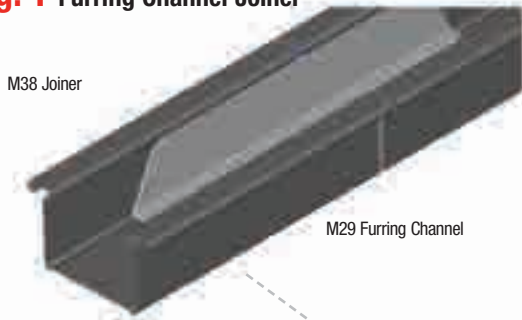


Fig. 2 Batten Joiner

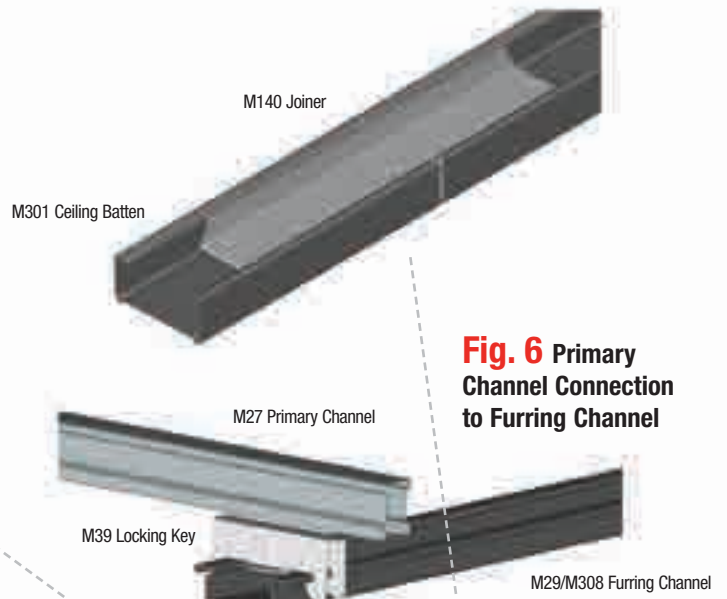


Fig. 7 Wall Track Fixing Detail



Fig. 6 Primary Channel Connection to Furring Channel

Fig. 8 Stabilising The System

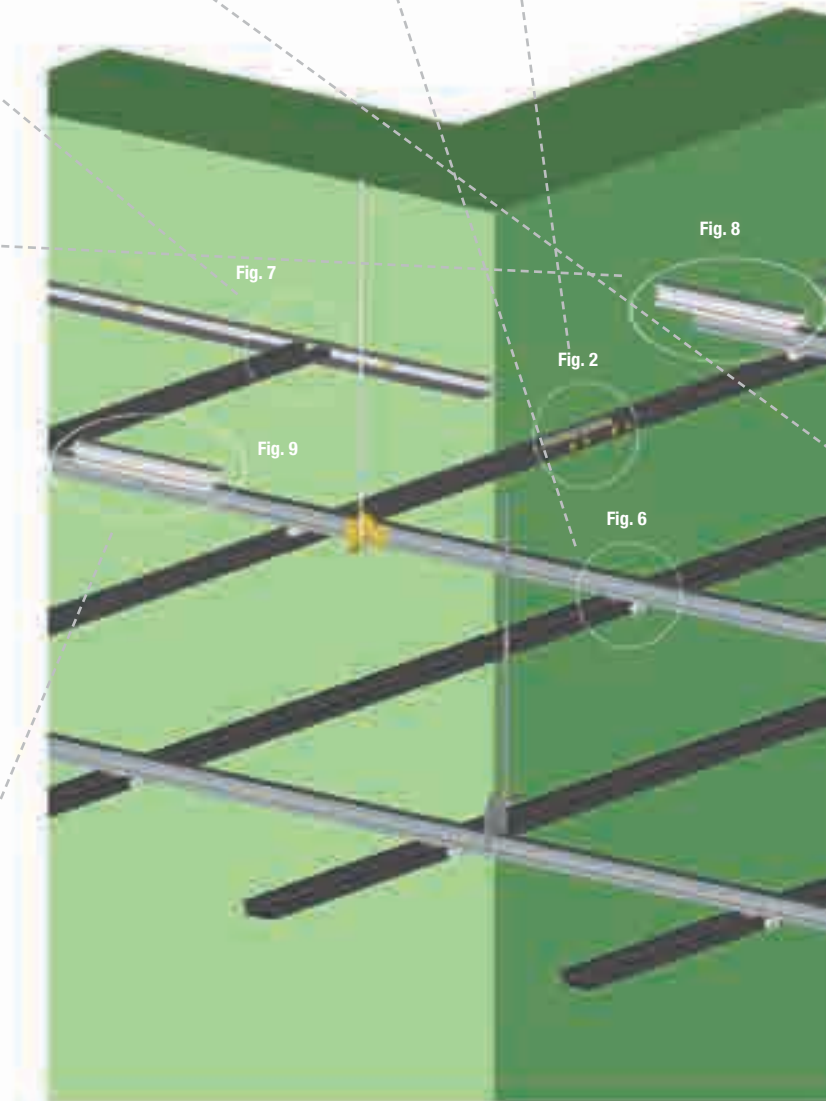
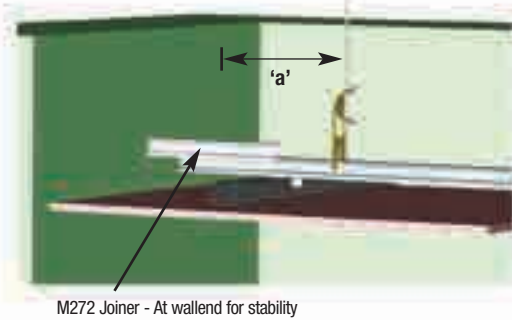


Table 14

| FIRST HANGER POSITION | |
|---------------------------------|--------------------|
| TOP CROSS RAIL | 'a' MAXIMUM |
| M25 25mm Top Cross Rail 0.55BMT | 300mm |
| M27 25mm Top Cross Rail 0.75BMT | 400mm |
| M28 38mm Top Cross Rail | 400mm |

* For one layer of plasterboard

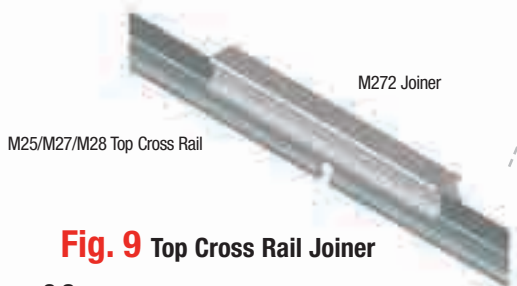


Fig. 9 Top Cross Rail Joiner

Fig. 4 Top Cross Rail
Thread Adjustable Attachment

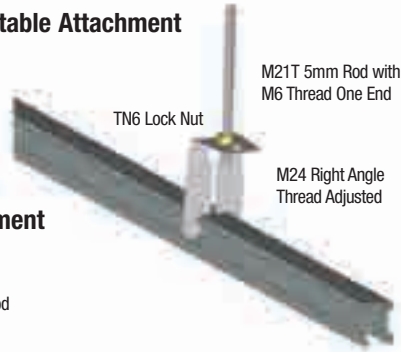


Fig. 3 Top Cross Rail
Adjustable Low Clearance Attachment

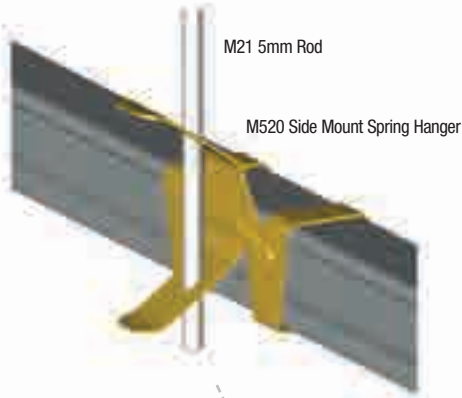


Fig. 5 Top Cross Rail Suspension Clip

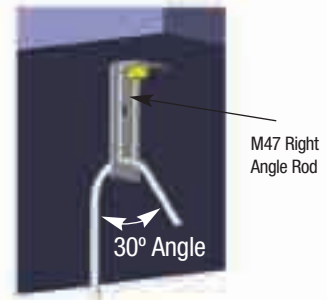


Fig. 10 Bracket Fixed to Concrete

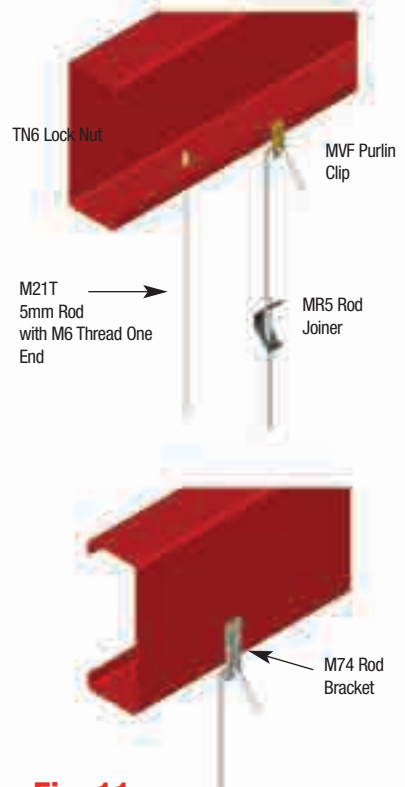
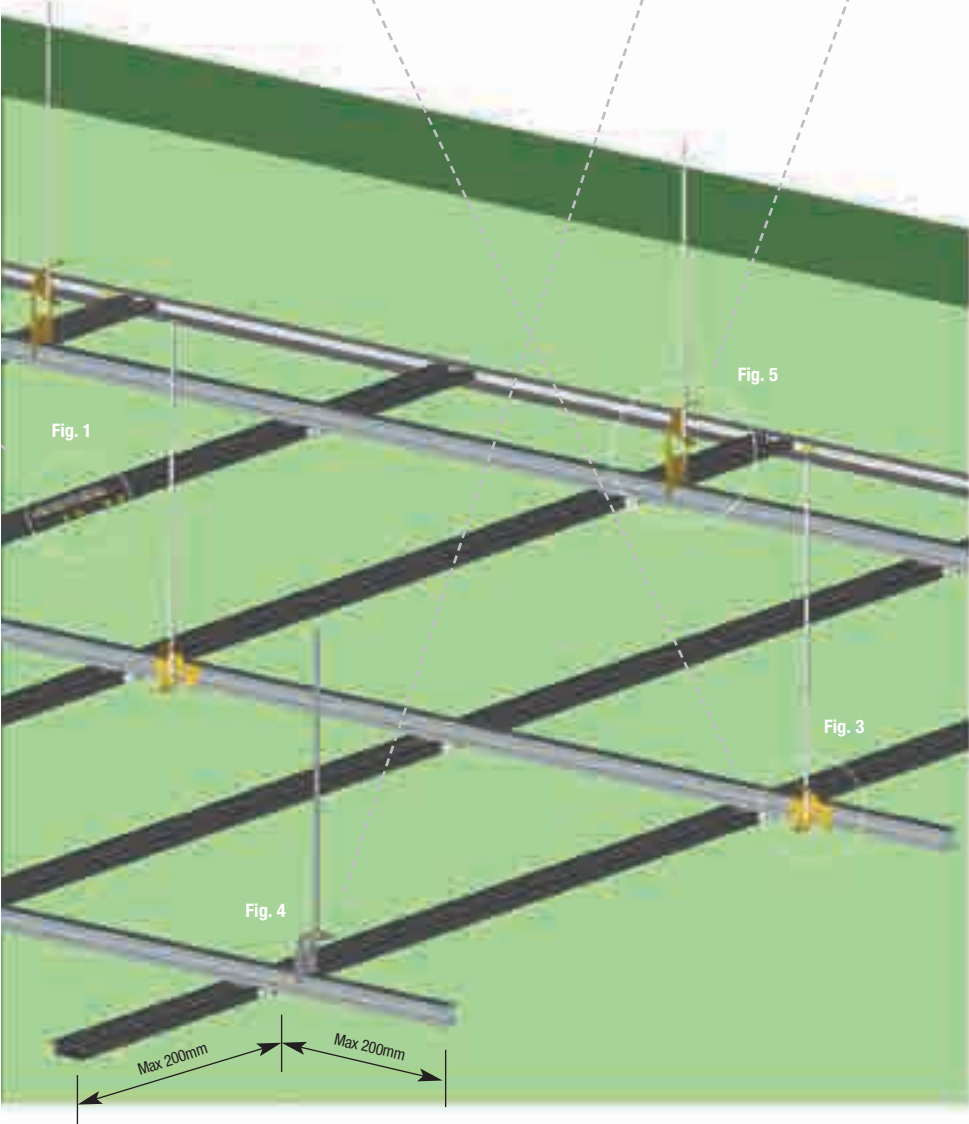


Fig. 11 Rod Suspension from Purlin

Installation Guide - Curved & Raked Ceilings

Concealed Ceiling Systems

Fig. 1
Curved Ceilings

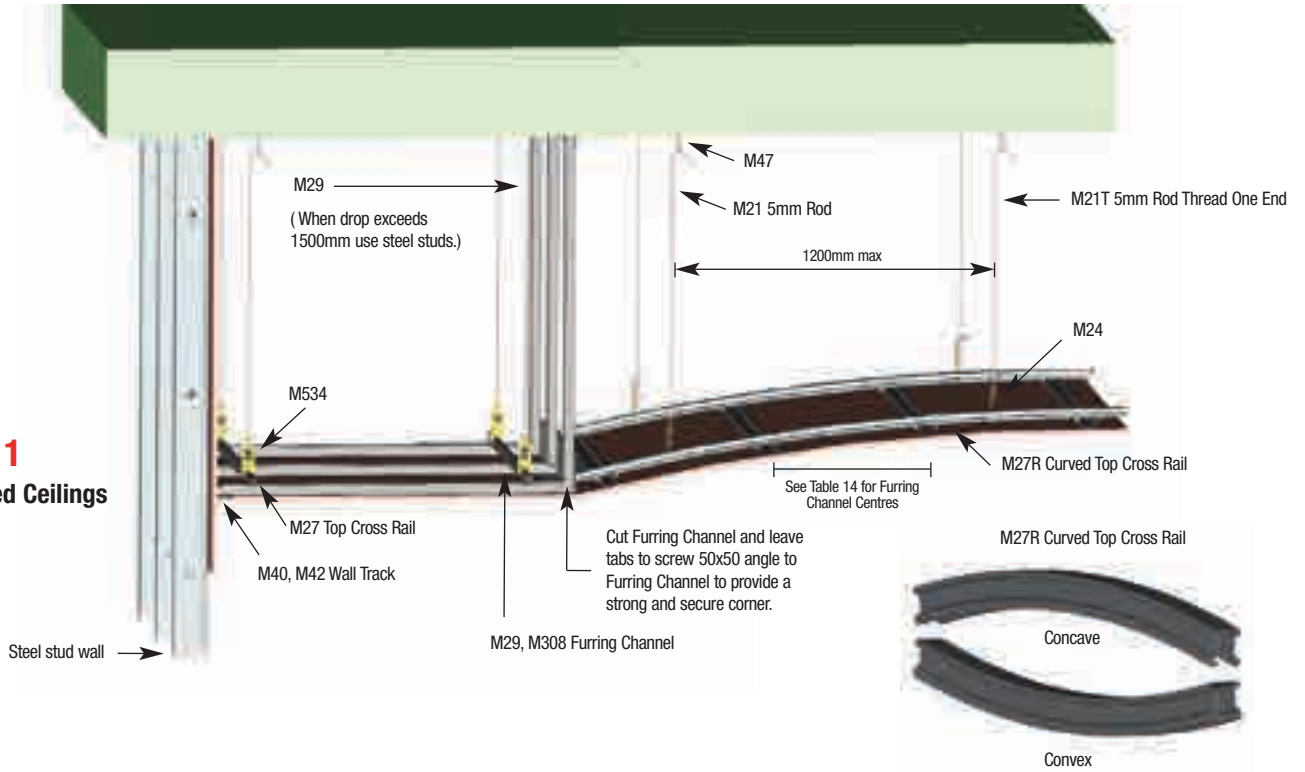


Table 15

| FURRING CHANNEL CENTRES - CURVED CEILINGS | | | | | | | |
|--|--|---------------|---------------|-------------|-------------|---------------|--------|
| PLASTERBOARD THICKNESS | CEILING RADIUS | | | | | | |
| | 900mm-1000mm | 1000mm-1500mm | 1500mm-2000mm | 2000-2500mm | 2500-3000mm | 3000mm-4000mm | 4000mm |
| | MAXIMUM FURRING CHANNEL CENTRES | | | | | | |
| 6.5mm | 150mm | 200mm | 250mm | 300mm | 350mm | 450mm | 550mm |
| 10mm | 150mm | 200mm | 250mm | 300mm | 350mm | 400mm | 500mm |
| 13mm | -- | 150mm | 200mm | 250mm | 300mm | 400mm | 500mm |
| 16mm | -- | -- | -- | -- | -- | 250mm | 350mm |

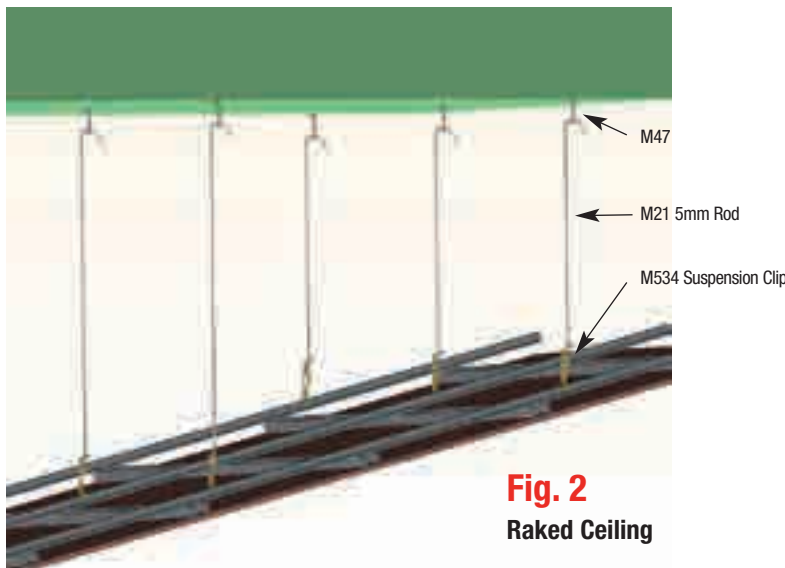
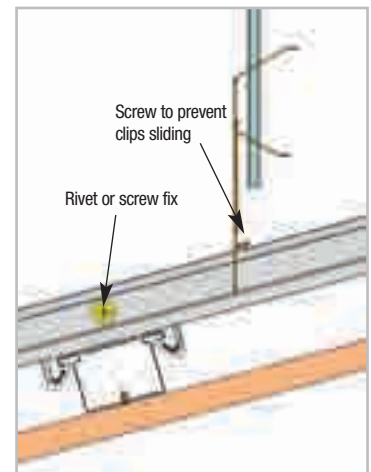


Fig. 2
Raked Ceiling



Installation Guide - External Suspended Ceilings

Certain components from Studco's Concealed Ceiling System are approved for installation in external applications, when due consideration is taken for external wind conditions.

You will need to first determine what is the design pressure of limit state for the ceiling location. This information needs to be determined by a suitable qualified engineer in accordance with AS/NZS1170.2 and AS/NZS 2785.

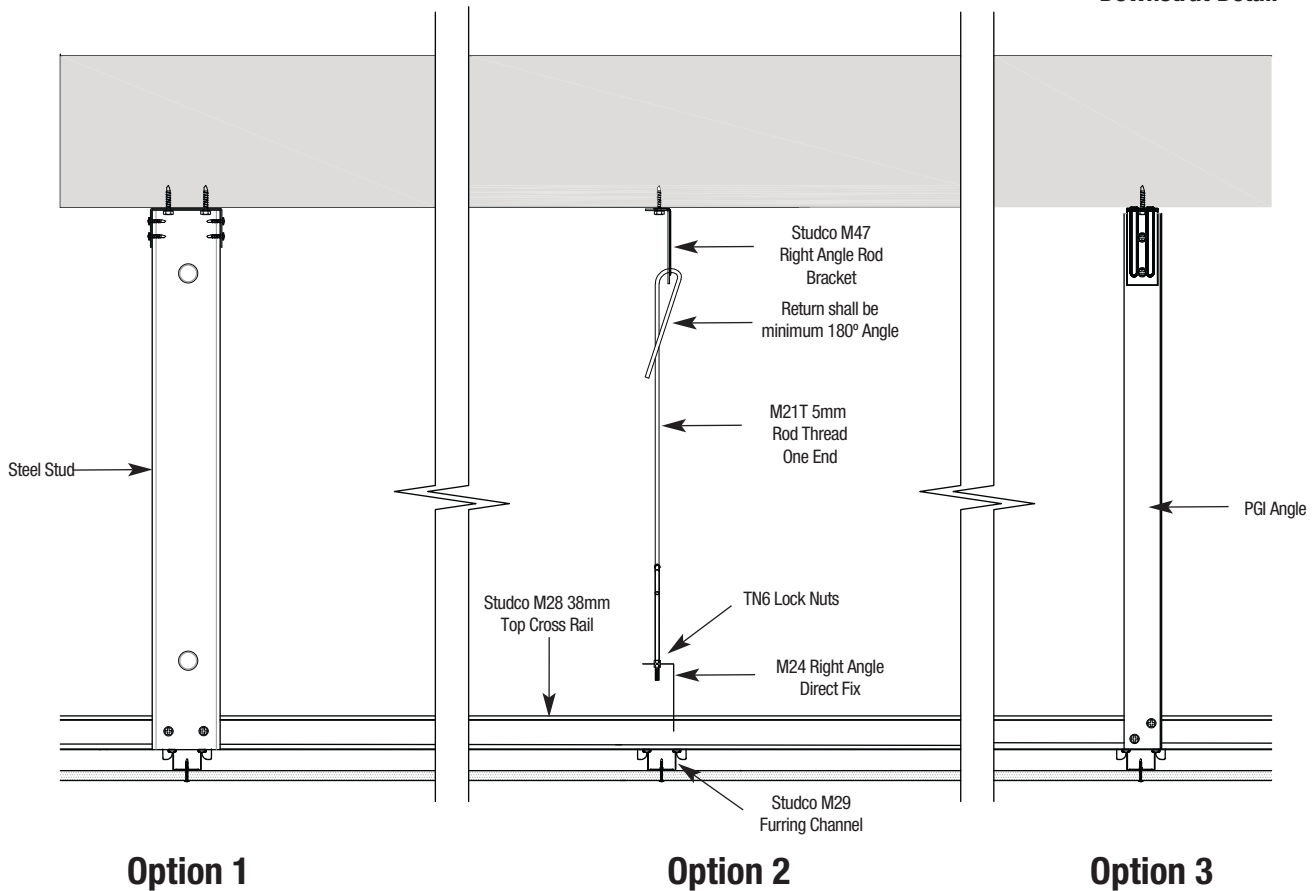
Suspending the ceiling system using a rigid down strut provides the necessary support against additional upward wind loads often experienced in external ceilings applications. Three different down strut options are shown in *Fig 1*. Additional options are available from Studco on request.

The recommended top cross rail profile for all external applications is Studco M28 top cross rail (38mm high x 0.75 BMT galvanized steel).

Adjustable friction-fit components, such as the Studco M534 and M520 spring hangers, are generally not suitable for use in external applications. The 25mm high top cross rail profiles, such as the Studco M25 and M27, should not be used in external applications either.

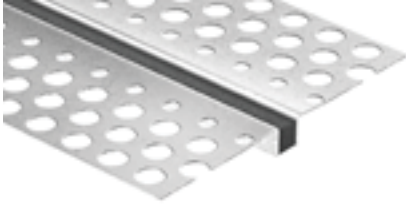
Please contact Studco technical team for external ceiling design specifications.

Fig. 1
Downstrut Detail



Installation Guide - Expansion Joints

Concealed Ceiling Systems



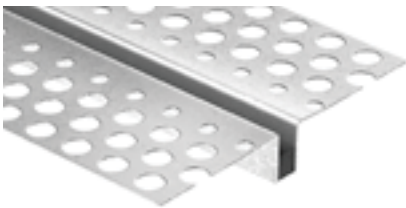
EJ06 Expansion Joint 6mm



PEJ93 PVC Expansion Joint with Zip Strip



PE127 PVC Hideaway Expansion Joint with Zip Strip

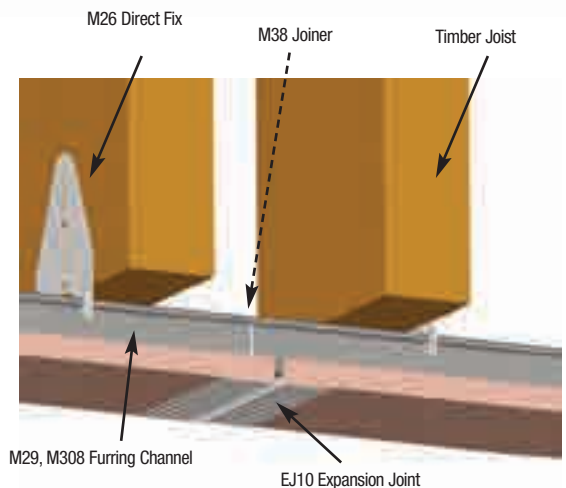
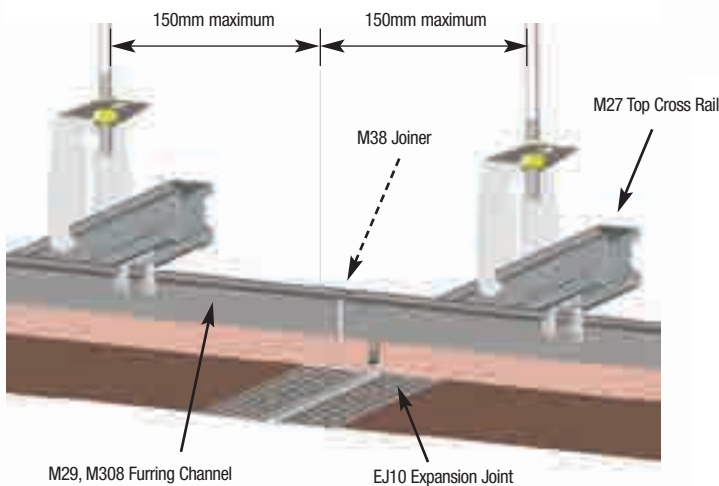
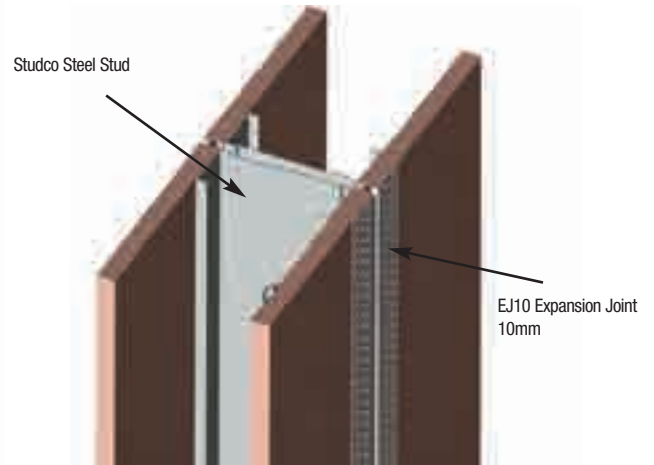


EJ10 Expansion Joint 10mm



EJ35 Expansion Joint 35mm

Expansion joints are required in walls and/or ceilings in order to accommodate movements in the building structure due to shrinkage, settlement, wind or seismic forces. Building board manufacturers recommend that expansion joints are required in unbroken walls and ceilings at no greater than 12 metre centres. The metal stopping bead on the Studco EJ06 and the EJ10 expansion joints are connected with a close cell neoprene sponge infill providing movement in all directions. These expansion joints also provide excellent acoustic isolation. Contact Studco Technical Services for more information.



Installation Guide - Slimceil



Concealed Ceiling Systems

The Studco SLIMCEIL ceiling system is a solution for compact ceiling cavities. The Studco SLIMCEIL Ceiling System consists of a C-channel section and a series of four brackets, designed to provide adjustable stand-off points for fixing the channel. The bracket range provides an overlapping series that covers ceiling cavities from 37mm through to 108mm. It's the simple, easy to install and fast answer to small ceiling cavities. Greater load strength can be achieved using the SLIMCEIL system, refer to table 18 for load ratings.

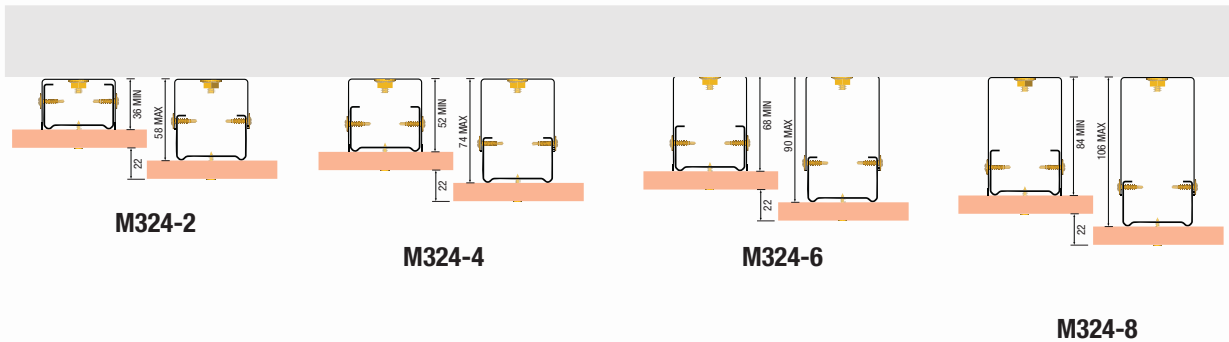
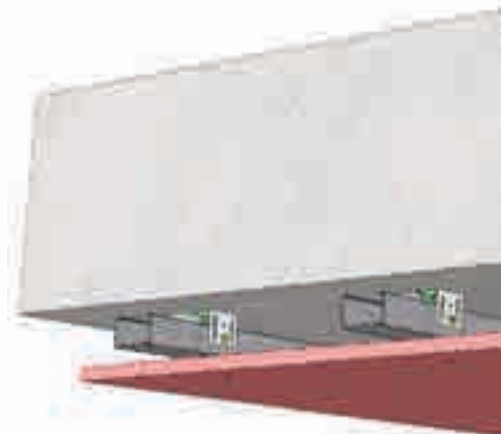


Table 17

| Part No. | CEILING BRACKETS | Cavity dist. mm. | Approx kg/pce | Material Thickness | Material Grade |
|----------|----------------------|------------------|---------------|--------------------|----------------|
| M324-2 | M324 Ceiling Bracket | 37-60* | 0.03 | 0.75BMT | G300 |
| M324-4 | M324 Ceiling Bracket | 53-76* | 0.04 | 0.75BMT | G300 |
| M324-6 | M324 Ceiling Bracket | 69-92* | 0.05 | 0.75BMT | G300 |
| M324-8 | M324 Ceiling Bracket | 85-108* | 0.06 | 0.75BMT | G300 |

* This is the distance between the concrete substrate and the back face of the plasterboard lining. Example: for a 85mm overall ceiling cavity using one layer of 13mm plasterboard, use a M324-4 Ceiling Bracket (85mm - 13mm = 72mm [bracket is adjustable 53~76mm]).



Span Tables - M355 35mm Ceiling Channel

Table 18

| SLIMCEIL CEILING LOAD TABLE | | |
|-----------------------------|--------------------------------------|----------------------|
| M355 Channel Spacing | 450mm | 600mm |
| M324 Bracket Fixing Spacing | Maximum Ceiling Weight – kg per sqm. | |
| 900mm | 85 kg/m ² | 64 kg/m ² |
| 1200mm | 47 kg/m ² | 34 kg/m ² |

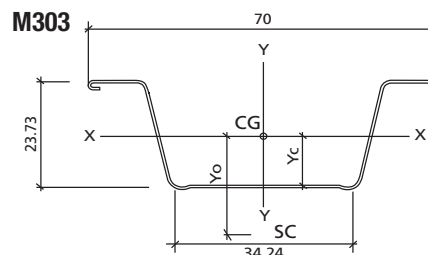
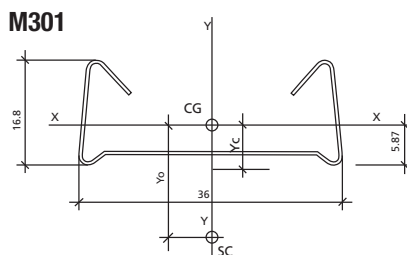
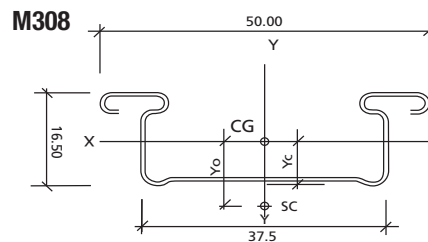
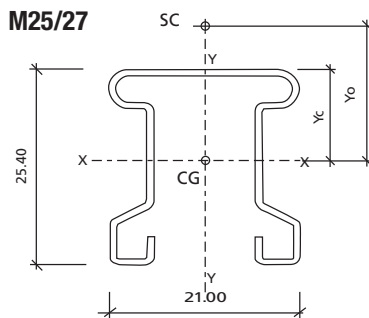
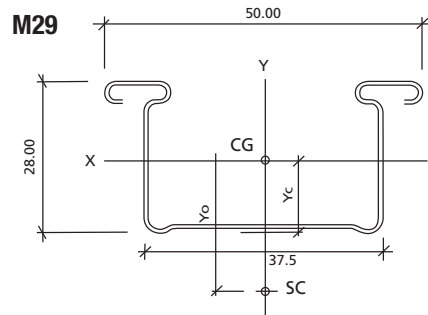
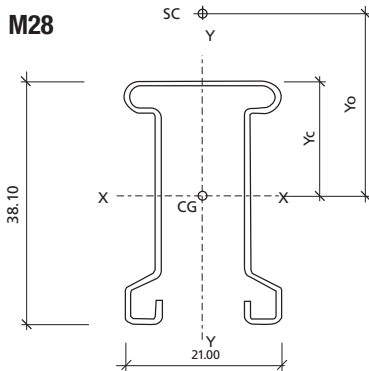
Section Properties and Dimensions

Table 19

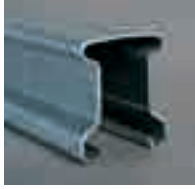
| CONCEALED CEILING SECTIONS PROPERTIES AND DIMENSIONS | | | | | | | | | | | | |
|---|--------|----------------------|-------|-------|--------------------------------------|--------------------------------------|---------------------|---------------------|-------|-------|-------------------------------------|-------------------|
| Section | BMT mm | Area mm ² | Yc mm | Yo mm | Ixx mm ⁴ x10 ³ | Iyy mm ⁴ x10 ³ | Zxx mm ³ | Zyy mm ³ | rx mm | ry mm | Iw mm ⁶ x10 ⁶ | J mm ³ |
| M29 | 0.5 | 60.73 | 13.45 | 24.28 | 7.19 | 17.74 | 494 | 710 | 10.88 | 17.09 | 1.59 | 5.06 |
| M308 | 0.5 | 49.45 | 7.28 | 12.93 | 2.02 | 13.89 | 231 | 556 | 6.39 | 16.76 | 0.42 | 4.12 |
| M25 | 0.55 | 50.37 | 11.73 | 21.61 | 4.14 | 2.78 | 303 | 265 | 9.06 | 7.43 | 0.24 | 5.08 |
| M27 | 0.75 | 68.69 | 11.73 | 21.90 | 5.64 | 3.80 | 413 | 362 | 9.06 | 7.43 | 0.33 | 12.88 |
| M28 | 0.75 | 87.74 | 17.95 | 36.41 | 15.84 | 4.48 | 786 | 426 | 13.44 | 7.14 | 0.74 | 16.45 |
| M303 | 0.42 | 45.92 | 11.07 | 21.93 | 4.34 | 19.93 | 336 | 585 | 9.72 | 20.83 | 0.59 | 2.70 |
| M301 | 0.45 | 34.20 | 5.85 | 15.38 | 0.96 | 6.28 | 94.76 | 358 | 5.30 | 13.55 | 0.333 | 2.31 |

Notes:

1. The above tables show the gross section properties. Designs using these tables need to be checked in accordance with AS/NZS4600.
2. Properties may vary because of manufacturing tolerances, total material used will not vary.
3. All section capacity calculated based on effective section at yield.



Span Tables - M25 Top Cross Rail



M25
25mm Top Cross Rail
0.55 BMT

Table 20

| MAXIMUM CEILING LOAD-M25 TOP CROSS RAIL SPAN: 900mm | | | | |
|--|---|--------------|--------------|--------------|
| FURRING CHANNEL | M29 | | M308 | |
| Furring Channel Spacing | 450mm | 600mm | 450mm | 600mm |
| Top Cross Rail Spacing | Maximum Ceiling Weight – kg per sqm. | | | |
| 900mm | 50.00 | 49.00 | 36.00 | 29.50 |
| 1200mm | 34.50 | 33.50 | 15.50 | 11.00 |
| 1500mm | 21.50 | 15.00 | 7.00 | 5.00 |
| 1800mm | 9.50 | 6.50 | N/A | N/A |

Table 21

| MAXIMUM CEILING LOAD-M25 TOP CROSS RAIL SPAN: 1200mm | | | | |
|---|---|--------------|--------------|--------------|
| FURRING CHANNEL | M29 | | M308 | |
| Furring Channel Spacing | 450mm | 600mm | 450mm | 600mm |
| Top Cross Rail Spacing | Maximum Ceiling Weight – kg per sqm. | | | |
| 900mm | 20.00 | 19.50 | 19.50 | 18.50 |
| 1200mm | 13.50 | 13.00 | 12.50 | 11.00 |
| 1500mm | 11.00 | 10.50 | 7.00 | 4.50 |
| 1800mm | 9.00 | 6.00 | N/A | N/A |

Table 22

| MAXIMUM CEILING LOAD-M25 TOP CROSS RAIL SPAN: 1500mm | | | | |
|---|---|--------------|--------------|--------------|
| FURRING CHANNEL | M29 | | M308 | |
| Furring Channel Spacing | 450mm | 600mm | 450mm | 600mm |
| Top Cross Rail Spacing | Maximum Ceiling Weight – kg per sqm. | | | |
| 900mm | 9.50 | 9.50 | 9.00 | 9.00 |
| 1200mm | 6.00 | 6.00 | 5.50 | 5.50 |
| 1500mm | 4.00 | 4.00 | 4.00 | 4.00 |
| 1800mm | N/A | N/A | N/A | N/A |

Notes:

- Span tables are based on the effective section properties as per AS/NZS 4600.
- Tables 20-28 are for Internal applications with a maximum design pressure of 0.25 kPa as per BCA 2009.

Span Tables - M27 Top Cross Rail

Concealed Ceiling Systems



M27
25mm Top Cross Rail
0.75 BMT

Table 23

| MAXIMUM CEILING LOAD-M27 TOP CROSS RAIL SPAN: 900mm | | | | |
|--|---|--------------|--------------|--------------|
| FURRING CHANNEL | M29 | | M308 | |
| Furring Channel Spacing | 450mm | 600mm | 450mm | 600mm |
| Top Cross Rail Spacing | Maximum Ceiling Weight – kg per sqm. | | | |
| 900mm | 67.00 | 66.00 | 41.00 | 30.50 |
| 1200mm | 47.00 | 36.00 | 15.50 | 11.00 |
| 1500mm | 22.00 | 16.00 | 6.50 | 4.50 |
| 1800mm | 10.00 | 6.50 | N/A | N/A |

Table 24

| MAXIMUM CEILING LOAD-M27 TOP CROSS RAIL SPAN: 1200mm | | | | |
|---|---|--------------|--------------|--------------|
| FURRING CHANNEL | M29 | | M308 | |
| Furring Channel Spacing | 450mm | 600mm | 450mm | 600mm |
| Top Cross Rail Spacing | Maximum Ceiling Weight – kg per sqm. | | | |
| 900mm | 28.00 | 28.00 | 26.00 | 25.50 |
| 1200mm | 19.50 | 19.50 | 14.50 | 11.50 |
| 1500mm | 15.50 | 15.00 | 6.50 | 4.50 |
| 1800mm | 10.00 | 6.00 | N/A | N/A |

Table 25

| MAXIMUM CEILING LOAD-M27 TOP CROSS RAIL SPAN: 1500mm | | | | |
|---|---|--------------|--------------|--------------|
| FURRING CHANNEL | M29 | | M308 | |
| Furring Channel Spacing | 450mm | 600mm | 450mm | 600mm |
| Top Cross Rail Spacing | Maximum Ceiling Weight – kg per sqm. | | | |
| 900mm | 13.00 | 13.00 | 12.50 | 12.00 |
| 1200mm | 9.50 | 9.00 | 9.00 | 9.00 |
| 1500mm | 6.50 | 6.50 | 6.00 | 5.00 |
| 1800mm | 5.50 | 5.50 | N/A | N/A |

Notes:

- Span tables are based on the effective section properties as per AS/NZS 4600.
- Tables 20-28 are for Internal applications with a maximum design pressure of 0.25 kPa as per BCA 2009.

Span Tables - M28 Top Cross Rail



M28
38mm Top Cross Rail
0.75 BMT

Table 26

| MAXIMUM CEILING LOAD-M28 TOP CROSS RAIL SPAN: 1200mm | | | | |
|---|---|--------------|--------------|--------------|
| FURRING CHANNEL | M29 | | M308 | |
| Furring Channel Spacing | 450mm | 600mm | 450mm | 600mm |
| Top Cross Rail Spacing | Maximum Ceiling Weight – kg per sqm. | | | |
| 900mm | 55.00 | 51.00 | 41.00 | 31.00 |
| 1200mm | 39.00 | 37.50 | 16.50 | 12.50 |
| 1500mm | 23.00 | 16.50 | 7.50 | 5.00 |
| 1800mm | 11.50 | 7.00 | N/A | N/A |

Table 27

| MAXIMUM CEILING LOAD-M28 TOP CROSS RAIL SPAN: 1500mm | | | | |
|---|---|--------------|--------------|--------------|
| FURRING CHANNEL | M29 | | M308 | |
| Furring Channel Spacing | 450mm | 600mm | 450mm | 600mm |
| Top Cross Rail Spacing | Maximum Ceiling Weight – kg per sqm. | | | |
| 900mm | 25.00 | 23.00 | 23.00 | 22.00 |
| 1200mm | 18.00 | 17.00 | 15.50 | 12.00 |
| 1500mm | 15.00 | 16.00 | 7.50 | 5.00 |
| 1800mm | 10.50 | 7.00 | N/A | N/A |

Table 28

| MAXIMUM CEILING LOAD-M28 TOP CROSS RAIL SPAN: 1800mm | | | | |
|---|---|--------------|--------------|--------------|
| FURRING CHANNEL | M29 | | M308 | |
| Furring Channel Spacing | 450mm | 600mm | 450mm | 600mm |
| Top Cross Rail Spacing | Maximum Ceiling Weight – kg per sqm. | | | |
| 900mm | 15.00 | 13.00 | 12.00 | 11.00 |
| 1200mm | 10.00 | 9.00 | 8.00 | 7.00 |
| 1500mm | 8.00 | 7.00 | 6.00 | 5.00 |
| 1800mm | 5.00 | 4.00 | N/A | N/A |

Notes:

- Span tables are based on the effective section properties as per AS/NZS 4600.
- Tables 20-28 are for Internal applications with a maximum design pressure of 0.25 kPa as per BCA 2009.

Span Tables - M29 Furring Channel - Direct Fix

Concealed Ceiling Systems



M29
28mm Furring Channel

Table 29

| MAXIMUM SPANS - WIND LOADS N1/N2 - M29 28mm FURRING CHANNEL DIRECT FIX | | | | |
|---|-------------|--------|-----------------|--------|
| FURRING CHANNEL SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 1270mm | 1170mm | 1730mm | 1605mm |
| 1 layer 13mm | 1230mm | 1140mm | 1690mm | 1560mm |
| 1 layer 16mm | 1200mm | 1120mm | 1650mm | 1525mm |
| 2 layers 10mm | 1170mm | 1070mm | 1605mm | 1475mm |
| 2 layers 13mm | 1150mm | 1060mm | 1580mm | 1450mm |
| 2 layers 16mm | 1100mm | 1020mm | 1525mm | 1400mm |

Table 30

| MAXIMUM SPANS - WIND LOADS N3/C1 - M29 28mm FURRING CHANNEL DIRECT FIX | | | | |
|---|-------------|--------|-----------------|--------|
| FURRING CHANNEL SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 1140mm | 1060mm | 1570mm | 1450mm |
| 1 layer 13mm | 1115mm | 1040mm | 1540mm | 1420mm |
| 1 layer 16mm | 1100mm | 1020mm | 1515mm | 1400mm |
| 2 layers 10mm | 1075mm | 995mm | 1475mm | 1365mm |
| 2 layers 13mm | 1060mm | 980mm | 1460mm | 1350mm |
| 2 layers 16mm | 1030mm | 960mm | 1415mm | 1320mm |

Table 31

| MAXIMUM SPANS - WIND LOADS N4/C2 - M29 28mm FURRING CHANNEL DIRECT FIX | | | | |
|---|-------------|-------|-----------------|--------|
| FURRING CHANNEL SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 850mm | 775mm | 1200mm | 1050mm |
| 1 layer 13mm | 860mm | 785mm | 1210mm | 1060mm |
| 1 layer 16mm | 870mm | 790mm | 1218mm | 1070mm |
| 2 layers 10mm | 880mm | 805mm | 1235mm | 1075mm |
| 2 layers 13mm | 890mm | 810mm | 1240mm | 1090mm |
| 2 layers 16mm | 900mm | 815mm | 1255mm | 1105mm |

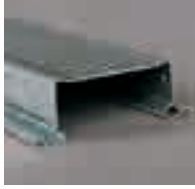
Table 32

| MAXIMUM SPANS - WIND LOADS N5/C3 - M29 28mm FURRING CHANNEL DIRECT FIX | | | | |
|---|-------------|-------|-----------------|-------|
| FURRING CHANNEL SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 725mm | 650mm | 925mm | 800mm |
| 1 layer 13mm | 735mm | 660mm | 935mm | 810mm |
| 1 layer 16mm | 745mm | 670mm | 945mm | 820mm |
| 2 layers 10mm | 760mm | 685mm | 960mm | 835mm |
| 2 layers 13mm | 765mm | 690mm | 965mm | 840mm |
| 2 layers 16mm | 778mm | 700mm | 980mm | 870mm |

Notes:

- Span tables are based on the effective section properties as per AS/NZS 4600.
- Strength and serviceability criteria compliant.
- Serviceability deflection limit L/300.
- Tables 29-42 for external/internal applications and relative to wind class as per AS 1170.1, 1170.2 and AS/NZS 4600.
- Wind classification as per AS 4055.

Span Tables - M308 Furring Channel - Direct Fix



M308
16mm Furring Channel

Table 33

| MAXIMUM SPANS - WIND LOADS N1/N2 - M308 16mm FURRING CHANNEL DIRECT FIX | | | | |
|--|--------------------|--------------|------------------------|--------------|
| FURRING CHANNEL SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 1040mm | 950mm | 1380mm | 1260mm |
| 1 layer 13mm | 1010mm | 930mm | 1350mm | 1240mm |
| 1 layer 16mm | 960mm | 905mm | 1320mm | 1200mm |
| 2 layers 10mm | 910mm | 850mm | 1150mm | 1015mm |
| 2 layers 13mm | 900mm | 840mm | 1160mm | 1010mm |
| 2 layers 16mm | 850mm | 760mm | 1100mm | 1005mm |

Table 34

| MAXIMUM SPANS - WIND LOADS N3/C1 - M308 16mm FURRING CHANNEL DIRECT FIX | | | | |
|--|--------------------|--------------|------------------------|--------------|
| FURRING CHANNEL SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 910mm | 830mm | 1250mm | 1140mm |
| 1 layer 13mm | 900mm | 820mm | 1220mm | 1120mm |
| 1 layer 16mm | 890mm | 800mm | 1205mm | 1100mm |
| 2 layers 10mm | 850mm | 760mm | 1150mm | 1110mm |
| 2 layers 13mm | 840mm | 750mm | 1110mm | 1050mm |
| 2 layers 16mm | 820mm | 740mm | 1100mm | 1015mm |

Table 35

| MAXIMUM SPANS - WIND LOADS N4/C2 - M308 16mm FURRING CHANNEL DIRECT FIX | | | | |
|--|--------------------|--------------|------------------------|--------------|
| FURRING CHANNEL SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 740mm | 640mm | 990mm | 890mm |
| 1 layer 13mm | 750mm | 650mm | 1000mm | 900mm |
| 1 layer 16mm | 760mm | 660mm | 1010mm | 910mm |
| 2 layers 10mm | 770mm | 670mm | 1020mm | 920mm |
| 2 layers 13mm | 780mm | 680mm | 1030mm | 930mm |
| 2 layers 16mm | 800mm | 700mm | 1050mm | 945mm |

Table 36

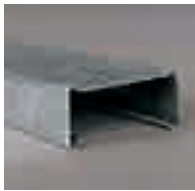
| MAXIMUM SPANS - WIND LOADS N5/C3 - M308 16mm FURRING CHANNEL DIRECT FIX | | | | |
|--|--------------------|--------------|------------------------|--------------|
| FURRING CHANNEL SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 640mm | 590mm | 840mm | 790mm |
| 1 layer 13mm | 650mm | 610mm | 850mm | 800mm |
| 1 layer 16mm | 660mm | 620mm | 860mm | 810mm |
| 2 layers 10mm | 670mm | 630mm | 870mm | 820mm |
| 2 layers 13mm | 680mm | 640mm | 880mm | 830mm |
| 2 layers 16mm | 705mm | 650mm | 900mm | 850mm |

Notes:

- Span tables are based on the effective section properties as per AS/NZS 4600.
- Strength and serviceability criteria compliant.
- Serviceability deflection limit L/300.
- Tables 29-42 for external/internal applications and relative to wind class as per AS 1170.1, 1170.2 and AS/NZS 4600.
- Wind classification as per AS 4055.

Span Tables - M301 Batten - Direct Fix

Concealed Ceiling Systems



M301
16mm Ceiling Batten

Table 37

| MAXIMUM SPANS - WIND LOADS N1/N2 - M301 16mm CEILING BATTEN DIRECT FIX | | | | |
|---|--------------------|--------------|------------------------|--------------|
| BATTEN SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 970mm | 920mm | 1200mm | 1200mm |
| 1 layer 13mm | 970mm | 920mm | 1200mm | 1200mm |

Table 38

| MAXIMUM SPANS - WIND LOADS N3/C1 - M301 16mm CEILING BATTEN DIRECT FIX | | | | |
|---|--------------------|--------------|------------------------|--------------|
| BATTEN SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 910mm | 820mm | 1200mm | 1120mm |
| 1 layer 13mm | 910mm | 820mm | 1200mm | 1110mm |

Notes:

1. Span tables are based on the effective section properties as per AS/NZS 4600.
2. Strength and serviceability criteria compliant.
3. Serviceability deflection limit L/300.
4. Tables 29-42 for external/internal applications and relative to wind class as per AS 1170.1, 1170.2 and AS/NZS 4600.
5. Wind classification as per AS 4055.

WIND CLASSIFICATIONS

- N1/N2 COVERS GENERAL SUBURBAN HOUSING
- N3/C1 COVERS EXPOSED OPEN TERRAIN OR ON TOP OF RIDGES
SUBURBAN AREA IN CYCLONIC AREAS
- N4/C2 VERY EXPOSED OVERLOOKING THE COASTLINE
OPEN TERRAIN IN CYCLONIC AREAS
- N5/C3 MAINLY RELATES TO VERY EXPOSED CYCLONIC CONDITIONS
INCLUDING FAR NORTH QUEENSLAND AND PORT HEDLAND

Span Tables - M303 Batten - Direct Fix



M303
24mm Cyclonic
Ceiling Batten

Table 39

| MAXIMUM SPANS - WIND LOADS N1/N2 - M303 24mm CYCLONIC CEILING BATTEN DIRECT FIX | | | | |
|--|-------------|-------|-----------------|--------|
| BATTEN SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 970mm | 890mm | 1350mm | 1250mm |
| 1 layer 13mm | 940mm | 870mm | 1290mm | 1200mm |
| 1 layer 16mm | 920mm | 850mm | 1260mm | 1160mm |
| 2 layers 13mm | 880mm | 810mm | 1200mm | 1110mm |
| 2 layers 16mm | 860mm | 780mm | 1160mm | 1070mm |

Table 40

| MAXIMUM SPANS - WIND LOADS N3/C1 - M303 24mm CYCLONIC CEILING BATTEN DIRECT FIX | | | | |
|--|-------------|-------|-----------------|--------|
| BATTEN SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 870mm | 810mm | 1200mm | 1110mm |
| 1 layer 13mm | 860mm | 800mm | 1180mm | 1090mm |
| 1 layer 16mm | 850mm | 780mm | 1150mm | 1070mm |
| 2 layers 13mm | 820mm | 750mm | 1120mm | 1030mm |
| 2 layers 16mm | 800mm | 740mm | 1090mm | 1000mm |

Table 41

| MAXIMUM SPANS - WIND LOADS N4/C2 - M303 24mm CYCLONIC CEILING BATTEN DIRECT FIX | | | | |
|--|-------------|-------|-----------------|-------|
| BATTEN SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 680mm | 620mm | 1030mm | 800mm |
| 1 layer 13mm | 690mm | 630mm | 1040mm | 810mm |
| 1 layer 16mm | 700mm | 640mm | 1050mm | 820mm |
| 2 layers 13mm | 720mm | 660mm | 1075mm | 840mm |
| 2 layers 16mm | 730mm | 670mm | 1085mm | 850mm |

Table 42

| MAXIMUM SPANS - WIND LOADS N5/C3 - M303 24mm CYCLONIC CEILING BATTEN DIRECT FIX | | | | |
|--|-------------|-------|-----------------|-------|
| BATTEN SPACING | 450mm | 600mm | 450mm | 600mm |
| PLASTERBOARD LINING | SINGLE SPAN | | CONTINUOUS SPAN | |
| 1 layer 10mm | 600mm | 520mm | 750mm | 630mm |
| 1 layer 13mm | 610mm | 530mm | 760mm | 640mm |
| 1 layer 16mm | 620mm | 540mm | 770mm | 650mm |
| 2 layers 13mm | 640mm | 560mm | 790mm | 670mm |
| 2 layers 16mm | 650mm | 570mm | 800mm | 680mm |

Notes:

- Span tables are based on the effective section properties as per AS/NZS 4600.
- Strength and serviceability criteria compliant.
- Serviceability deflection limit L/300.
- Tables 29-42 for external/internal applications and relative to wind class as per AS 1170.1, 1170.2 and AS/NZS 4600.
- Wind classification as per AS 4055.



Sound Isolation Systems

Sound Isolations Systems

Resilmounts sound isolation systems cover a wide range of effective solutions for isolating noise transfer for the wall and ceiling industry. There are two types of noise transfer through walls and ceilings, airborne transfer, and structure borne transfer (see Fig 1). Both types need to be considered to achieve the most effective result.

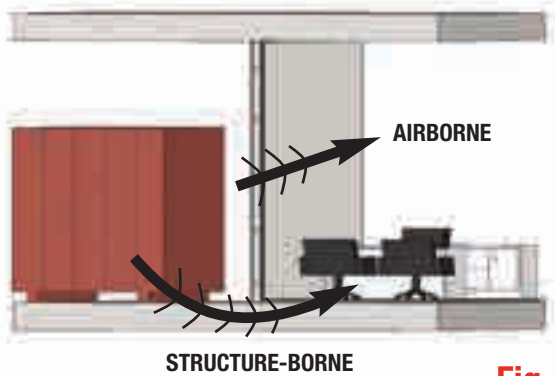


Fig. 1 Noise Transfer

AIRBORNE NOISE

Airborne noise is noise that travels through air, through a direct or open path between the noise source and the recipient. Airborne noise requires sound insulation and isolation control.

STRUCTURE-BORNE NOISE

Structure-borne noise is audible noise which is generated by vibrations induced into the structure. Vibrations can be generated by machinery attached directly to a surface, that in turn transfers into the structure. Another example is the sound of footsteps on the floor above a listener. Structure-borne noise requires the isolation of the vibration itself.

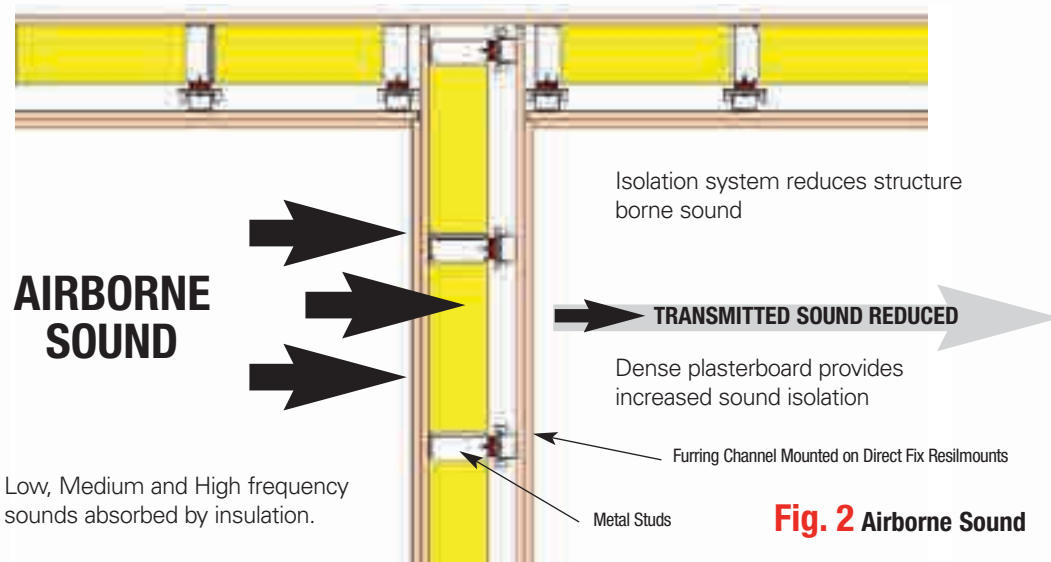


Fig. 2 Airborne Sound

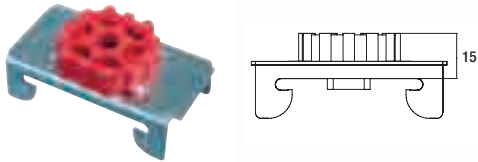
The installation of Resilmounts which suit standard furring channels and top cross rails are one of the most cost effective acoustic control systems as they isolate the system from the structure or adjoining parties. Fig. 2 shows how airborne sound is dissipated by using Resilmount resilient mounts to isolate one face of a wall from another. Resilmounts unique thermoplastic rubber outperforms standard rubber because of its absorbing characteristics. Resilmounts unique sound cell design guards against structure borne vibrations transferring into the body of the Resilmount because of its strong column design providing a small percentage of contact surface area with the structure or substrate it is fixed to.

Components - Resilient Mounts

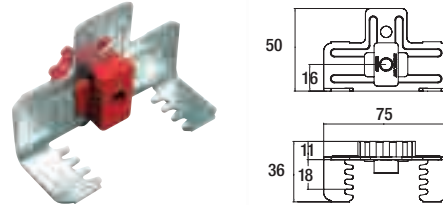


Sound Isolation Systems

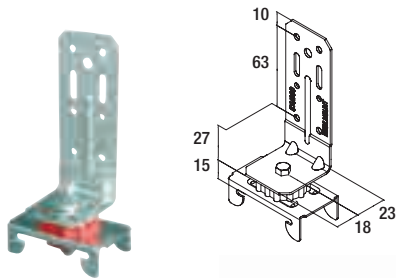
M237R Direct Fix Furring Channel Resilient Mount



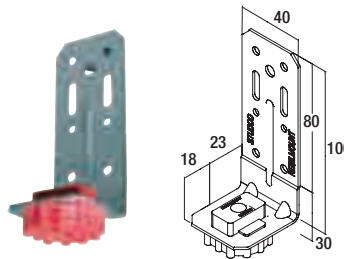
MBFR Adjustable Direct Fix Furring Channel Resilient Mount



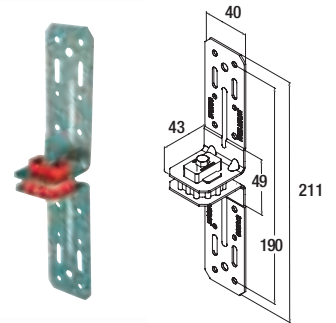
M96R Furring Channel to Purlin Resilient Mount



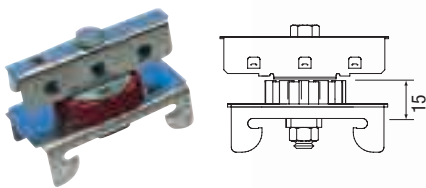
M48R Resilient Mount Right Angle Bracket



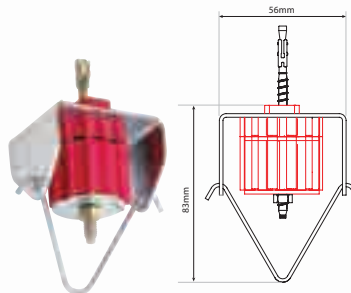
M24R Resilient Joiner Bracket



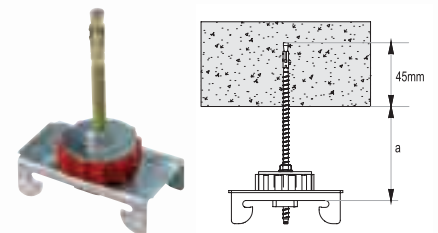
M237TR Furring Channel to Top Cross Rail Resilient Mount



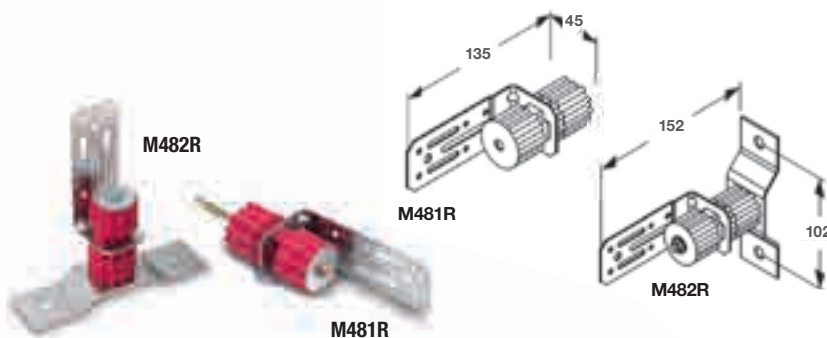
M326R Static Deflection Direct-Fix Resilient Hanger



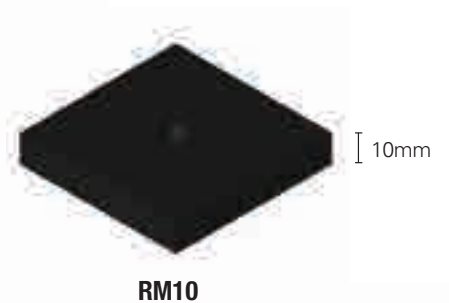
M239R Adjustable Direct-fix Clip



M481R & M482R Isolated Wall Brace



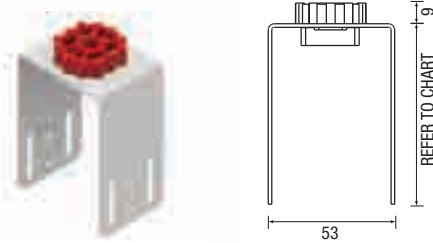
RM10 Rubber Impact Mats



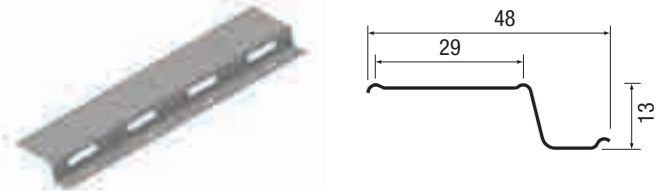
Components - Resilient Mounts



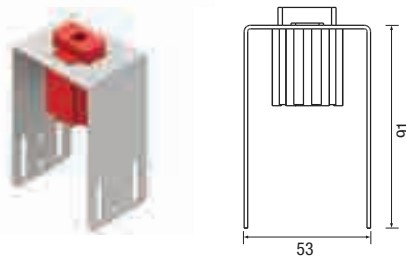
M324R Resilient Mount Ceiling Bracket



M581 Resilmount Resilient Channel



M319R Static Deflection Ceiling Bracket

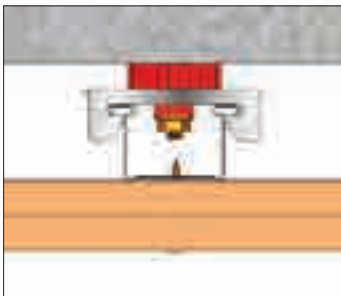


M50R-BLK 54kg Resilient Isolation Hanger
M50R-RED 29kg Resilient Isolation Hanger
M50R-BLU 91kg Resilient Isolation Hanger



Installation Guide - Resilient Mounts

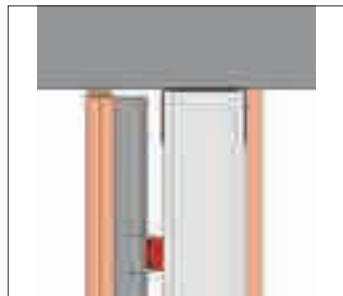
Fig. 1



M237R

Resilient mount shown direct fixed to concrete to provide isolation for wall & ceiling applications

Fig. 2



M237R

Resilient clip shown direct fixed to steel stud to provide greater acoustic ratings.

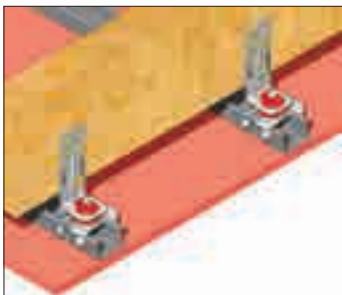
Fig. 3



MBFR

Adjustable resilient mount shown direct fixed to concrete walls. MBFR clips have adjustment of 4 positions at 6mm increments to adjust furring channels, eliminating packers.

Fig. 4



M96R

Resilient mount shown fixed to purlins or trusses, for the suspension of furring channels. 5mm slotted holes are provided in bracket for adjustability.

Fig. 5



M48R

Resilient mount shown direct fixed to the structure, to brace an acoustic wall to the structure without compromising sound and vibration transmission requirements.

Fig. 6



M48R

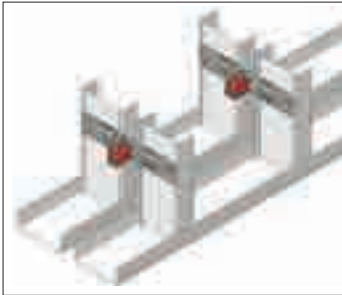
Resilient mount shown with 5mm suspension rod attached for isolation of ceiling from structure.

Installation Guide - Resilient Mounts



Sound Isolation Systems

Fig. 7



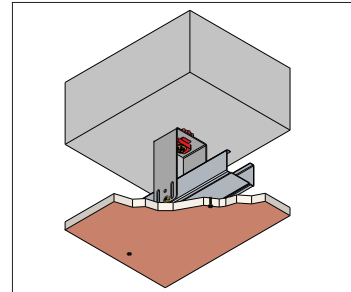
M24R
Resilient mount shown installed in a chase wall to improve the strength and rigidity of the chase walls, allowing both walls to support each other whilst remaining completely isolated.

Fig. 8



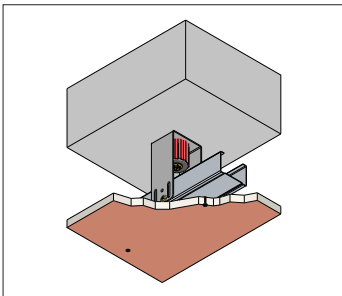
M50R - BLK
Resilient mounts shown with 5mm suspension rod attached for isolation of the ceiling from the structure. The noise absorption properties of this mount allow it to deflect 4.76mm when loaded to the nominated kilogram amount.

Fig. 9



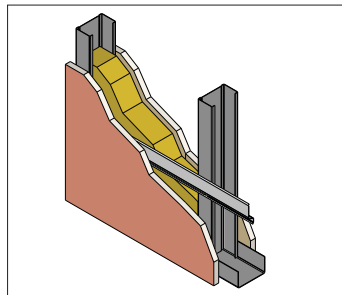
M324R
Resilimount system for low clearance ceiling cavities. Slimceil M324R provides a fully isolated ceiling system, whilst maintaining minimum ceiling cavity.

Fig. 10



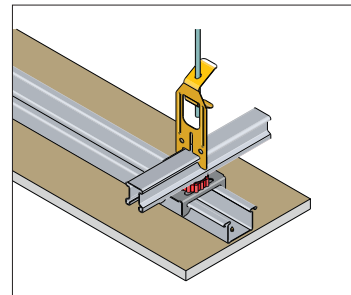
M319R
Resilient mount shown in the Slimceil system. This version of resilient mount meets the requirements of the NCC2011 static deflection requirements.

Fig. 11



M581
Resilient channel fixed to stud wall to provide reduction in sound transmission. Refer to table 43 for Resilient Channel spans.

Fig. 12



M237TR
Resilient mount shown in a concealed ceiling system. M237TR replaces the standard M39 locking key to isolate the ceiling from the support structure.

Span Table - M581



M581
Resilimount Resilient Channel

Table 43

| MAXIMUM SPANS - M581 SPAN TABLE | | |
|--|------------------------|--------------|
| FURRING CHANNEL SPACING | 450mm | 600mm |
| PLASTERBOARD LINING | CONTINUOUS SPAN | |
| 1 LAYER 10MM | 600mm | 600mm |
| 1 LAYER 13MM | 600mm | 600mm |
| 1 LAYER 16MM | 600mm | 600mm |
| 2 LAYERS 10MM | 600mm | 600mm |
| 2 LAYERS 13MM | 600mm | 600mm |
| 2 LAYERS 16MM | 600mm | 600mm |

Notes:

1. Span tables are based on the effective section properties as per AS/NZS 4600.
2. Strength and serviceability criteria compliant.
3. Serviceability deflection limit L/360.

Installation Guide - Resilient Mounts



Fig. 1
Resilient Mounts Direct
Fixed to Steel Stud Wall
Application.

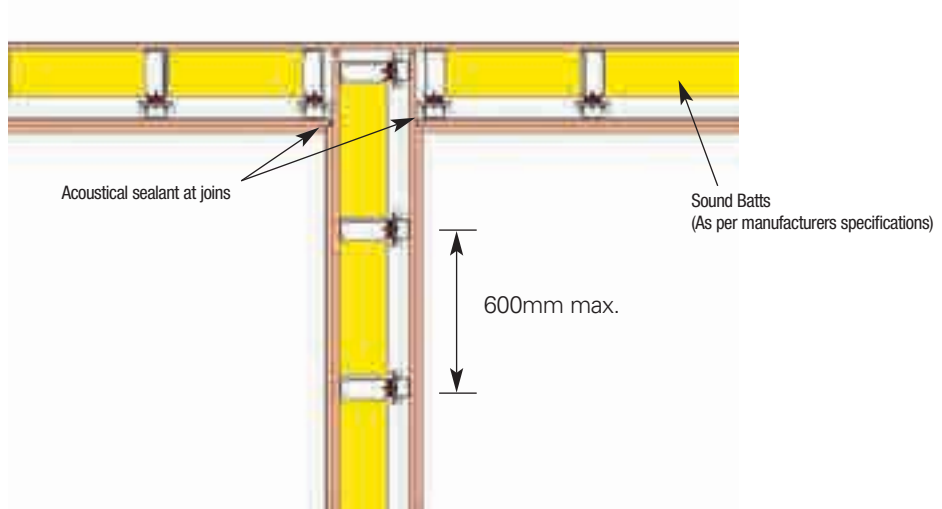
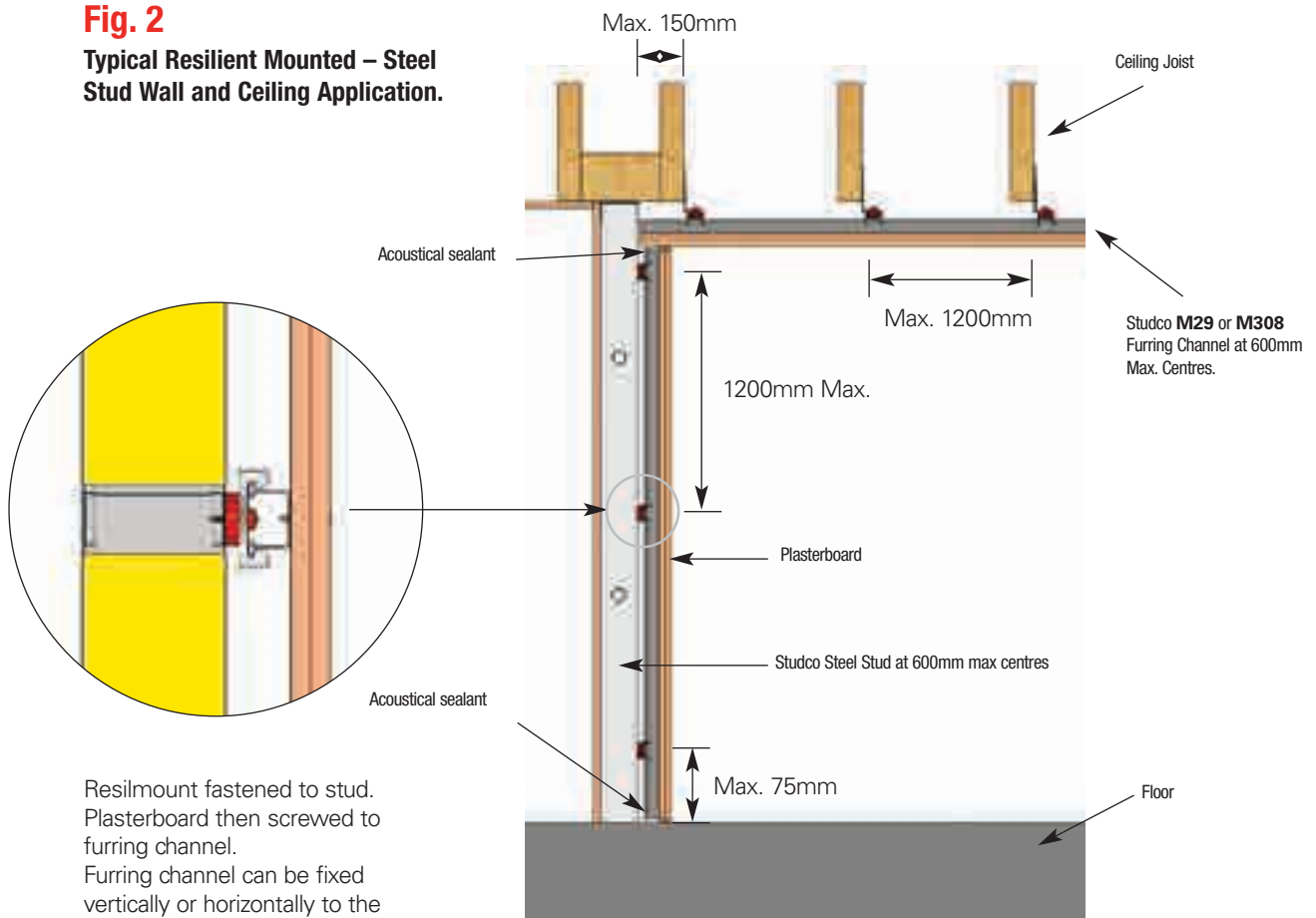


Fig. 2
Typical Resilient Mounted – Steel
Stud Wall and Ceiling Application.



Resilimount fastened to stud.
Plasterboard then screwed to
furring channel.
Furring channel can be fixed
vertically or horizontally to the
structure.

Steel Stud Systems



Studco Stud
Fits positively into track



External Infill Framing
Between concrete and steel structures



Service Holes
Bell-mouthed service holes at 500mm centres – do not require grommets for cabling. Knurled face for screw point location.



Boxed Studs
Studco .50, .55 and .75BMT steel studs can be easily boxed together providing extra strength at door openings or where greater loads are required.

Steel Stud Systems

The Studco steel stud framing system is engineered to provide designers and installers the solution to create framing systems that are not only durable and versatile but can also achieve the needs and design criteria in accordance with the BCA and appropriate Australian standards. The Studco steel stud framing system is manufactured in a range of various widths, lengths and material gauges from 0.50mmBMT to 1.5mm BMT. This range of stud and track profiles not only offer greater span and performance, but also are accompanied by a range of accessories including noggings, nogging track and bracket joining systems. The design tables in this section have been formulated to comply with the relevant Australian standards, accompanied by substantial laboratory and field testing. Construction of fire-rated or sound rated wall systems can be achieved by using the Studco steel framing system and accessories. Refer to the building board manufacturers for more detailed information.

Components

Stud and Track Sections

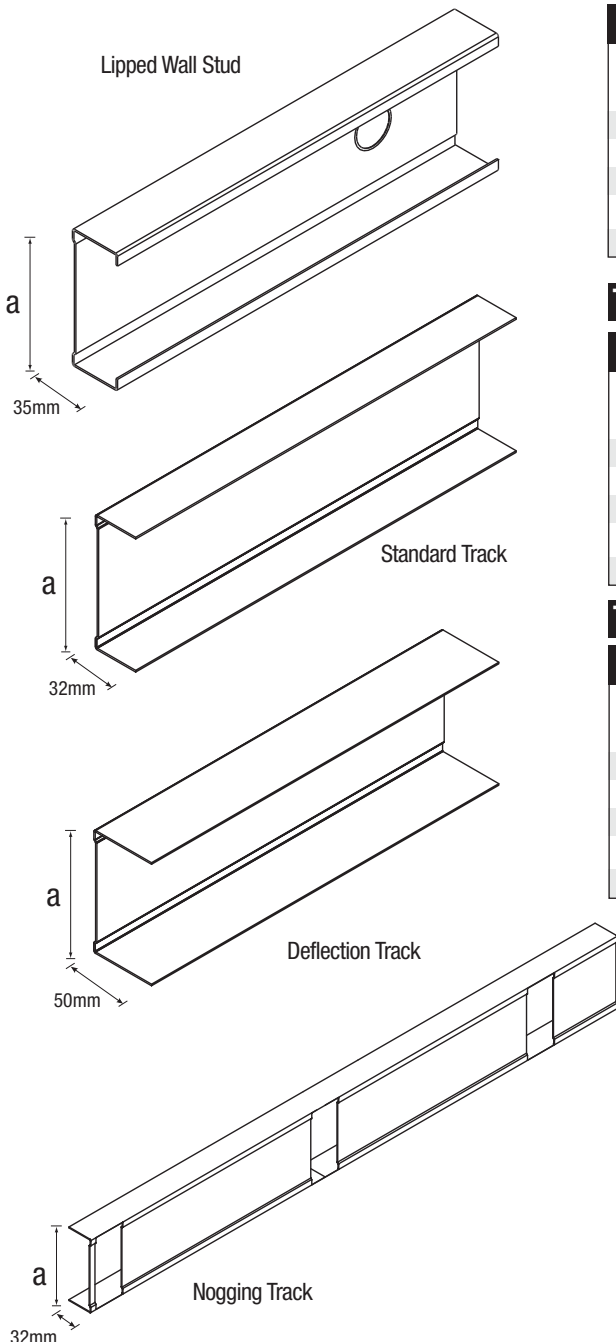


Table 44

| LIPPED WALL STUDS - PART NUMBERS | | | | |
|---|----------------------------|--------|--------|--------|
| Section Width "a" | Base Metal Thickness - BMT | | | |
| | 0.5mm | 0.55mm | 0.75mm | 1.15mm |
| 51mm | S5150 | N/A | S5175 | N/A |
| 64mm | S6450 | N/A | S6475 | S64115 |
| 76mm | N/A | S7655 | S7675 | S76115 |
| 92mm | N/A | S9255 | S9275 | S92115 |
| 150mm | N/A | N/A | S1507 | S15012 |

Table 45

| STANDARD TRACK - PART NUMBERS | | | | | | |
|--------------------------------------|----------------------------|--------------|--------|------------|--------|--------|
| Section Width "a" | Base Metal Thickness - BMT | | | | | |
| | 0.5mm | 0.5mm Hemmed | 0.55mm | 0.7 Hemmed | 0.75mm | 1.15mm |
| 51mm | T5155 | N/A | N/A | N/A | T5175 | N/A |
| 64mm | T6455 | T6455H | N/A | T6475H | T6475 | T64115 |
| 76mm | T7655 | T7655H | N/A | T7675H | T7675 | T76115 |
| 92mm | T9255 | T9255H | N/A | T9275H | T9275 | T92115 |
| 150mm | N/A | N/A | N/A | N/A | T1507 | T15012 |

Table 46

| DEFLECTION HEAD TRACK - PART NUMBERS | | | | | |
|---|----------------------------|--------|--------------|--------|---------|
| Section Width "a" | Base Metal Thickness - BMT | | | | |
| | 0.5mm | 0.55mm | 0.7mm hemmed | 0.75mm | 1.15mm |
| 51mm | N/A | N/A | N/A | DT5175 | N/A |
| 64mm | N/A | DT645 | DT6475H | DT6475 | DT64115 |
| 76mm | N/A | DT765 | DT7675H | DT7675 | DT76115 |
| 92mm | N/A | DT925 | DT9275H | DT9275 | DT92115 |
| 150mm | N/A | N/A | N/A | DT1507 | DT15012 |

Table 47

| NOGGING TRACK - PART NUMBERS | | | | | |
|-------------------------------------|--------------------------|----------------------------|--------|-----------|--------|
| Section Width "a" | Nogging Track Centres | Base Metal Thickness - BMT | | | |
| | | 0.5mm | 0.55mm | 0.75mm | 1.15mm |
| 64mm | 300mm | N/A | N/A | NT6475-30 | N/A |
| 64mm | 450mm | N/A | N/A | NT6475-45 | N/A |
| 64mm | 600mm | N/A | N/A | NT6475-60 | N/A |
| 76mm | 300mm | N/A | N/A | NT7675-30 | N/A |
| 76mm | 450mm | N/A | N/A | NT7675-45 | N/A |
| 76mm | 600mm | N/A | N/A | NT7675-60 | N/A |
| 92mm | 300mm | N/A | N/A | NT9275-30 | N/A |
| 92mm | 450mm | N/A | N/A | NT9275-45 | N/A |
| 92mm | 600mm | N/A | N/A | NT9275-60 | N/A |
| 150mm | 300mm | N/A | N/A | NT1507-30 | N/A |
| 150mm | 450mm | N/A | N/A | NT1507-45 | N/A |
| 150mm | 600mm | N/A | N/A | NT1507-60 | N/A |

Steel Stud Systems – Components

Noggings

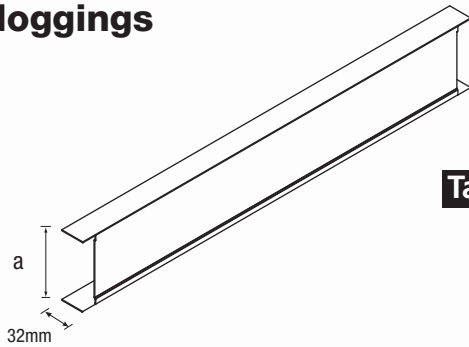


Table 48

| NOGGINGS - PART NUMBERS | | | | | |
|--------------------------------|---------------------------|----------------------------|--------|----------|--------|
| Section Width "a" | Noggings Track Centres | Base Metal Thickness - BMT | | | |
| | | 0.5mm | 0.55mm | 0.75mm | 1.15mm |
| 64mm | 450mm | N/A | N/A | N6475-45 | N/A |
| 64mm | 600mm | N/A | N/A | N6475-60 | N/A |
| 76mm | 450mm | N/A | N/A | N7675-45 | N/A |
| 76mm | 600mm | N/A | N/A | N7675-60 | N/A |
| 92mm | 450mm | N/A | N/A | N9275-45 | N/A |
| 92mm | 600mm | N/A | N/A | N9275-60 | N/A |
| 150mm | 450mm | N/A | N/A | N1507-45 | N/A |
| 150mm | 600mm | N/A | N/A | N1507-60 | N/A |

Noggings Brackets

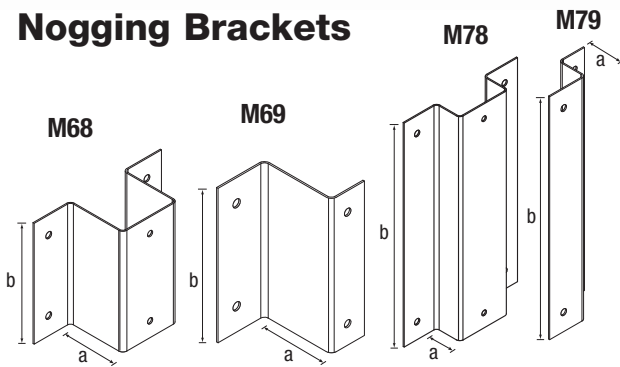


Table 49

| NOGGING BRACKETS - PART NUMBERS | | | | |
|--|-----------------------|-----------------------|------|---------------------------|
| Part No | Section Height "a" | Section length "b" | BMT | Timber Noggings Thickness |
| M68 | 36mm | 72mm | 0.75 | 35mm |
| M69 | 36mm | 72mm | 0.75 | 35mm |
| M78 | 18mm | 150mm | 0.75 | 18mm |
| M79 | 18mm | 150mm | 0.75 | 18mm |

Studco Ezy-Track



Table 50

| EZY TRACK - PART NUMBERS | | | | | |
|---------------------------------|-------------------------|----------------------------|--------|--------|--------|
| Section Width "a" | Track leg height "b" | Base Metal Thickness - BMT | | | |
| | | 0.5mm | 0.55mm | 0.75mm | 1.15mm |
| 51mm | 42mm | N/A | N/A | FX51 | N/A |
| 64mm | 45mm | N/A | N/A | FX64 | N/A |
| 76mm | 39mm | N/A | N/A | FX76 | N/A |
| 92mm | 41mm | N/A | N/A | FX92 | N/A |
| 150mm | 42mm | N/A | N/A | FX150 | N/A |

Brackets

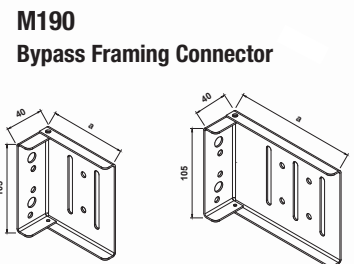
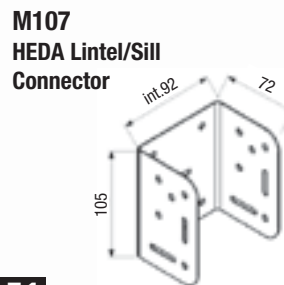
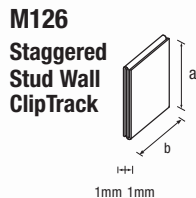
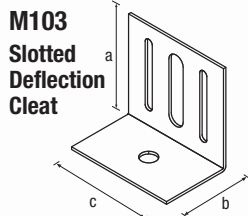
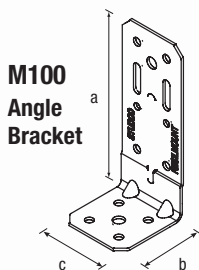


Table 51

| BRACKETS - PART NUMBERS | | | | |
|--------------------------------|----------------------|----------------------|----------------------|-------|
| Part No. | Section Width "a" | Section Width "b" | Section Width "c" | BMT |
| M100 | 100mm | 45mm | 40mm | 1.5mm |
| M103* | 75mm | 50mm | 80mm | 3.0mm |
| M104 | 65mm | 35mm | 80mm | 2.0mm |
| M545 | 75mm | 75mm | 55mm | 1.5mm |

* To be superseded by M104

Steel Stud Systems - Wall Studs

HEDAjamb



HEDAjamb 63
(92mm wide)

HEDAjamb 90
(92mm wide)

HEDAjamb 63
(150mm wide)

Table 52

| STUDCO HEDA JAMB - PART NUMBERS | | |
|---------------------------------|----------------------------|-----------|
| Section Width "a" | Base Metal Thickness - BMT | |
| | 1.15mm | 1.55mm |
| 76mm | HJ9276115 | N/A |
| 89mm | N/A | HJ9289155 |

Rapidtrack Slotted Deflection Track

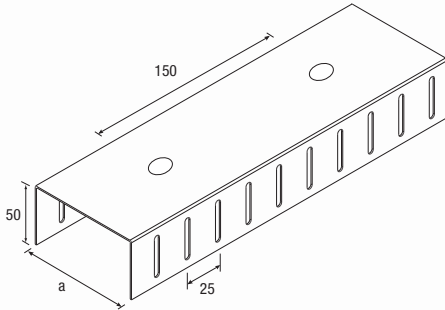


Table 53

| RAPIDTRACK | | | | |
|----------------------|----------------------------|--------|--------|----------|
| SECTION WIDTH "a" | Base Metal Thickness - BMT | | | |
| | 0.5mm | 0.55mm | 0.75mm | 1.15mm |
| 51mm | N/A | N/A | N/A | N/A |
| 64mm | N/A | N/A | DS6475 | DS76115 |
| 76mm | N/A | N/A | DS7675 | N/A |
| 92mm | N/A | N/A | DS9275 | DS92115 |
| 150mm | N/A | N/A | N/A | DS150115 |

Hole size is $\phi 14$ mm, suitable for M12 bolts or M10 masonry sleeve anchors.

Strongarm Wall Brace

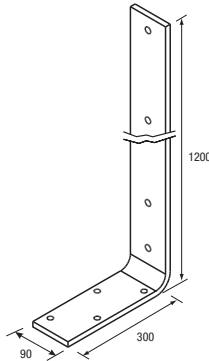


Table 54

| PART No | STRONGARM | Section A Height | Section B Length | BMT |
|---------|-----------------------------|---------------------|---------------------|------|
| M110 | StrongArm Wall Brace 1200mm | 1200 | 300 | 12.0 |

Slimwall Brackets & Channel

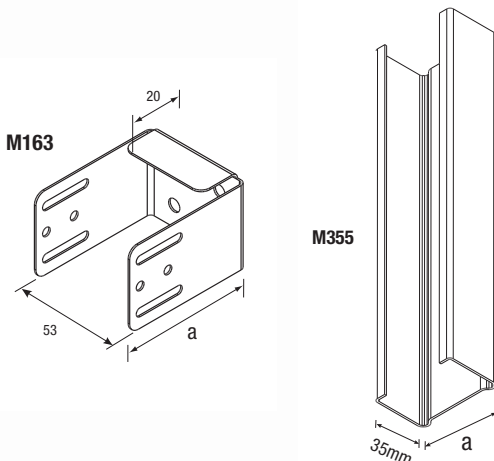


Table 55

| PART No | SLIMWALL | Section A Height |
|---------|----------------------------------|---------------------|
| M163-6 | Slimwall Bracket 69-92mm Cavity | 68mm |
| M163-8 | Slimwall Bracket 85-108mm Cavity | 84mm |
| M355 | M355 Ceiling Channel | 51mm |

Steel Stud Systems - Studs

The Studco lipped wall studs are manufactured in various widths and gauges from 0.50BMT to 1.15BMT. Bell mouth service holes are punched at 500mm centres eliminating the need for cabling grommets. The knurled face along the stud flange provides a positive screw point location. Studs can be boxed or spliced to extend the overall length or to provide strengthening if required. Refer to *Table 47* for splice fixing details.

Table 56

| SPLICE STUD FIXING DETAIL | | | |
|----------------------------------|-------------------------|--|---------|
| Wall Height | Splice Position In Wall | No. of Fasteners for both sides of studs at splice joint | |
| | | 0.50 / 0.55 / 0.75BMT | 1.15BMT |
| 0-6000mm | 0 -10% | 2 | 3 |
| | 10% - 25% | 3 | 5 |

Spliced Studs

0.75 BMT - 150mm studs
1.15 BMT - 64, 76, 92, 150mm studs

Spliced Studs

0.50 BMT - 51, 64mm studs
0.55 BMT - 76, 92mm studs
0.75 BMT - 51, 64, 76, 92mm studs

- Note:**
1. Splicing of studs is not suitable for load bearing walls unless certified by an engineer.
 2. Splices to be alternated top and bottom along wall length
 3. Do not splice studs between 25% - 75% of wall height
 4. Maximum stud spacing 600mm centres

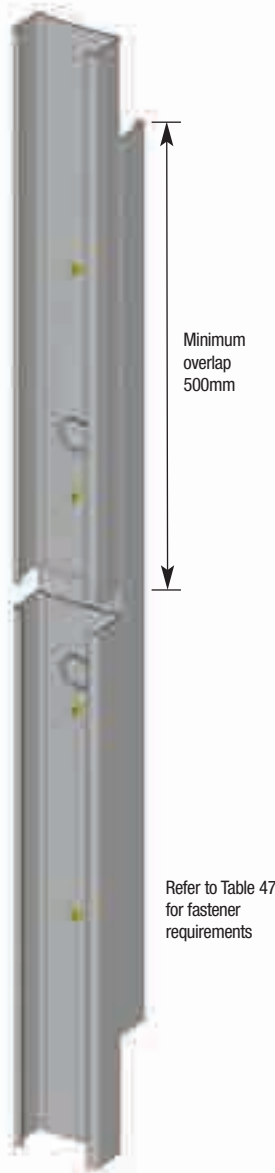


Fig. 1

Spliced Studs – Back to Back
Screw through at maximum 500mm centres.

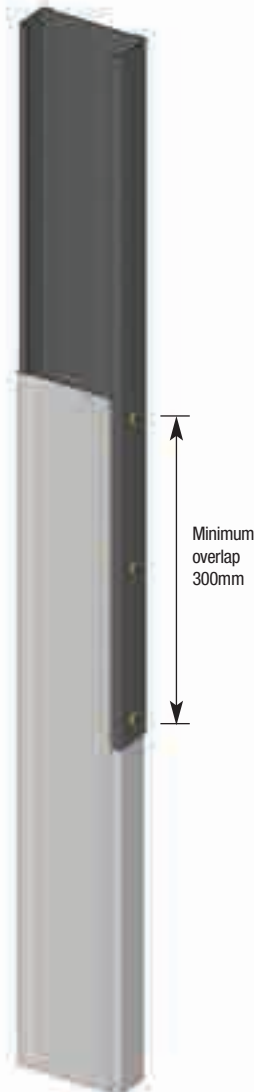


Fig. 2

Spliced Studs - Boxed
Refer to Table 47 for fixing requirements

Boxed Studs

0.50 & 0.55 BMT - all stud sizes



Fig. 3

Boxed Studs - Screw Fixing
only required if studs are unlined.

Back to Back Studs

0.75 & 1.15BMT - all stud sizes

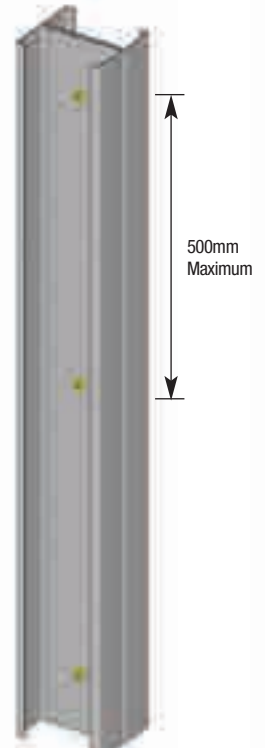


Fig. 4

Back to Back – Fixing for 1.15 stud range in lieu of Boxing stud.
Refer to Table 56 for fixing requirements

Steel Stud Systems - Tracks

The Studco Track sections provide a friction fit for the lipped wall studs. The friction fit holds the studs in position until the lining boards are fixed; this friction fit also accommodates a slip joint to allow for any movement in the primary structure. To allow for this movement to occur it is not recommended that the lining board is fixed to the track sections unless specifically stated. Studco Track Sections are manufactured in two different profiles: a standard track with a nominal leg height of 32mm and the deflection head track with a nominal leg height of 50mm. The standard track is also available with a rolled hemmed edge. This safety hem along the entire length of the track section reduces the exposure to sharp edges whilst also enhancing the rigidity of the profile.

Fig. 1 Bottom Track Fixing

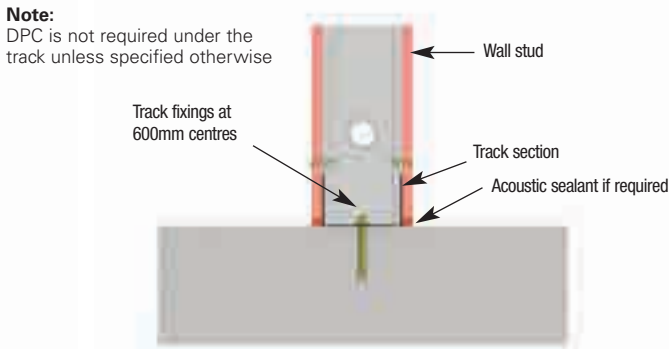
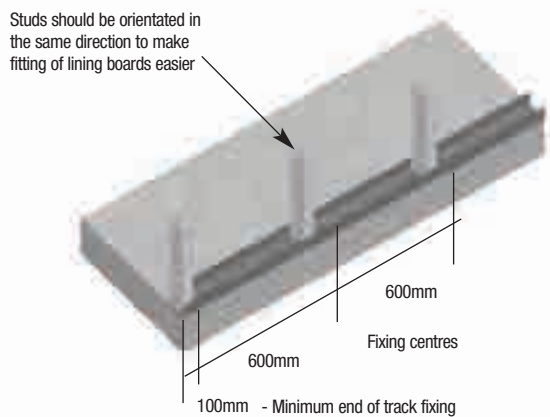


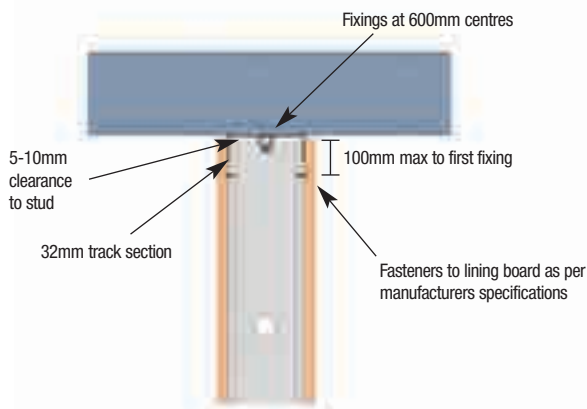
Fig. 2 Fixing Centres



Note:
Use 2 fixings at 600mm centres for the 150mm track section, approximately 20mm in from either side of the track.

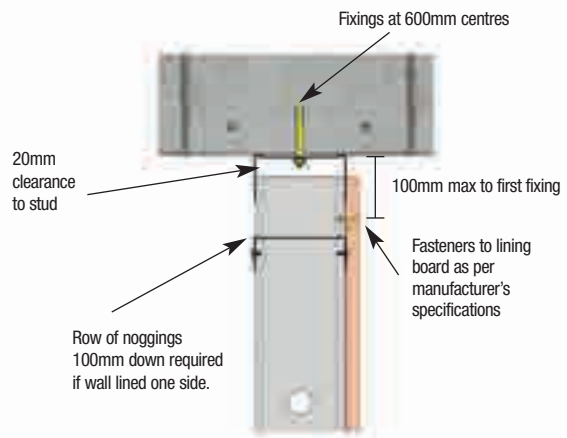
Note:
Where tracks are fastened to concrete minimum edge distances for all fixings must be maintained.

Fig. 3 Friction Fit



Note:
Do not fix cornice to walls rigidly where friction joints are installed.

Fig. 4 Deflection Head



Note:
Do not rigidly fix cornice to walls where deflection head is used.

Steel Stud Systems - Noggings

Studco noggings and nogging tracks are manufactured in a range of sizes to suit standard wall stud centres. Nogging track to suit custom centres and back to back studs is available. The use of noggings is to provide support and also to prevent twisting of the studs during the installation of the lining boards. Noggings also provide extra support to the wall construction, and in some instances a more cost effective design can be achieved by using noggings. Studco manufactures two types of noggings, individual noggings or nogging track. Noggings are supplied as pre-cut individual nogging pieces to save cutting on site and can also be installed after the studs and tracks have been fitted. Nogging track is a continuous track that can be installed in stud framing in one length and requires only two screw fixings per stud connection. Timber noggings may be used, providing they are fixed as per diagram *Fig. 3*. Treated timber must not be used. The minimum number of noggings for different wall configurations can be established from *Table 49*. This is applicable for internal walls subjected to 0.25kPa. Walls connected to the underside of a concrete slab must be installed with deflection head track and an additional row of noggings 100mm down, if lined one side only.

Fig. 1 Nogging

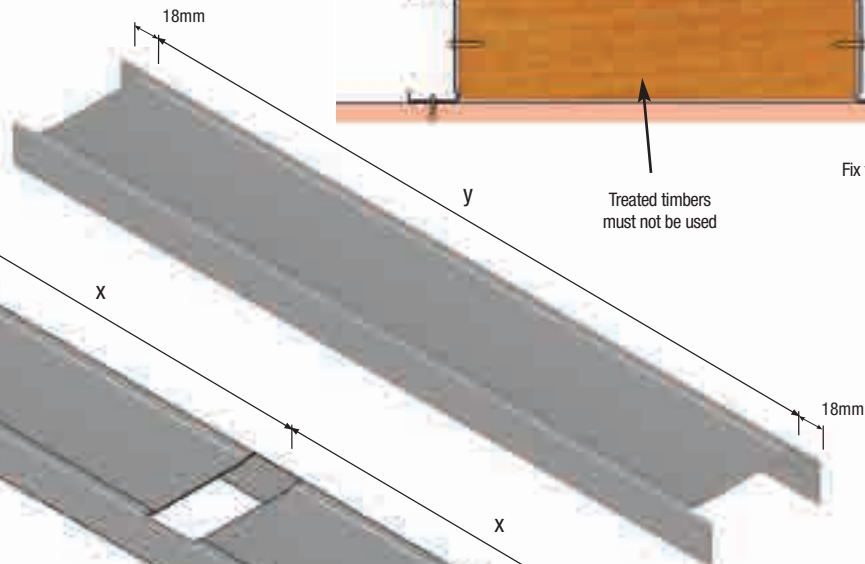


Fig. 2 Nogging Track

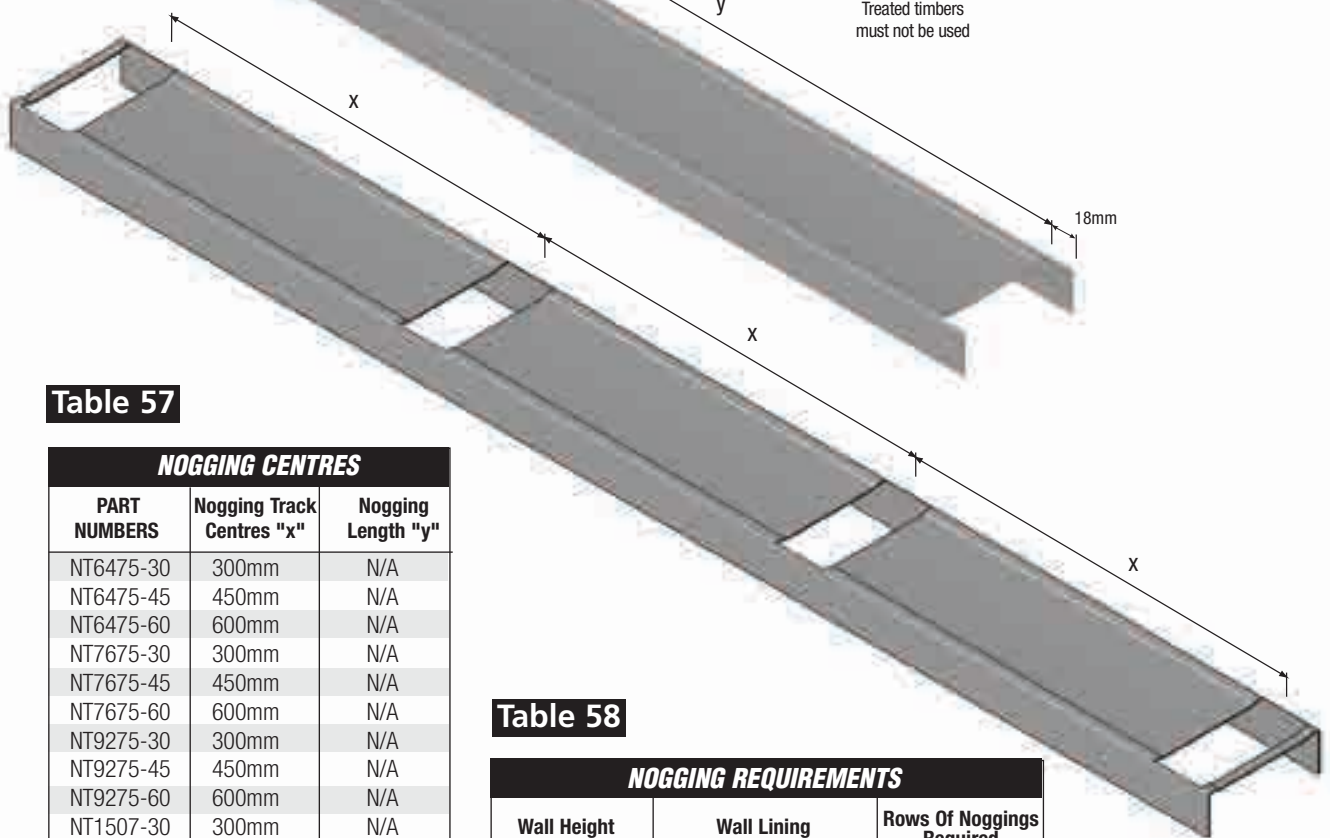


Fig. 3 Timber Nogging

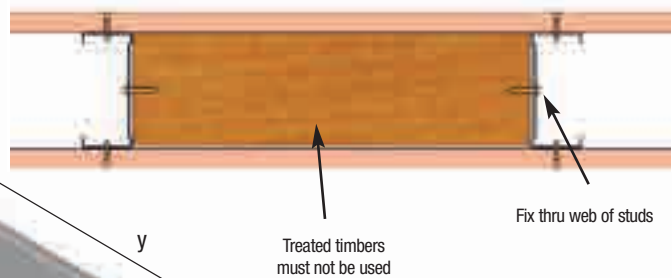


Table 57

| NOGGING CENTRES | | |
|-----------------|---------------------------|--------------------|
| PART NUMBERS | Nogging Track Centres "x" | Nogging Length "y" |
| NT6475-30 | 300mm | N/A |
| NT6475-45 | 450mm | N/A |
| NT6475-60 | 600mm | N/A |
| NT7675-30 | 300mm | N/A |
| NT7675-45 | 450mm | N/A |
| NT7675-60 | 600mm | N/A |
| NT9275-30 | 300mm | N/A |
| NT9275-45 | 450mm | N/A |
| NT9275-60 | 600mm | N/A |
| NT1507-30 | 300mm | N/A |
| NT1507-45 | 450mm | N/A |
| NT1507-60 | 600mm | N/A |
| N6475-45 | N/A | 412mm |
| N6475-60 | N/A | 562mm |
| N7675-45 | N/A | 412mm |
| N7675-60 | N/A | 562mm |
| N9275-45 | N/A | 412mm |
| N9275-60 | N/A | 562mm |
| N1507-45 | N/A | 412mm |
| N1507-60 | N/A | 562mm |

Table 58

| NOGGING REQUIREMENTS | | |
|----------------------|-----------------------|---------------------------|
| Wall Height | Wall Lining | Rows Of Noggings Required |
| 0 - 4.2m | Wall Lined Both Sides | 0 |
| 4.2m - 8.4m | | 1 |
| 0 - 3.0m | Wall Lined One Side | 1 |
| 3.0m - 6.0m | | 2 |
| 6.0m - 8.0m | | 3 |

Note: Walls connected to the underside of a concrete slab must be installed with deflection head track and additional row of noggings 100mm down if unlined or lined one side only. If slotted deflection head track is used, additional row of noggings 100mm down not required.

Installation Guide - Wall to Ceiling Intersections

Fig. 1 Top Track to Bridging Support Detail

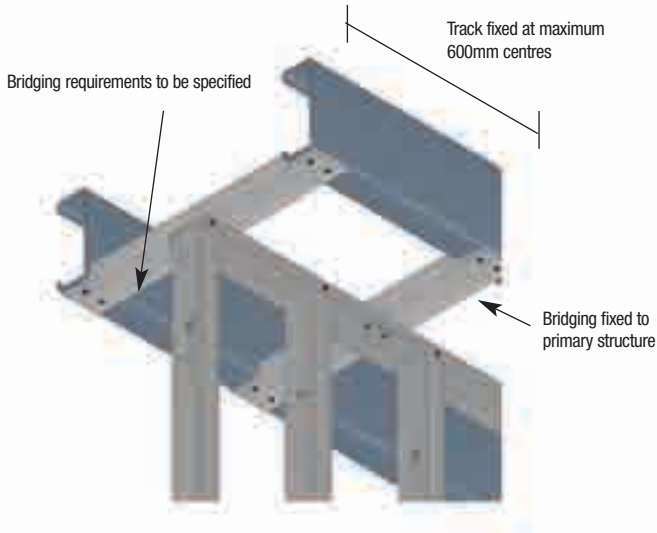


Fig. 2 Concealed Ceiling with Wall Parallel to Furring Channel Detail

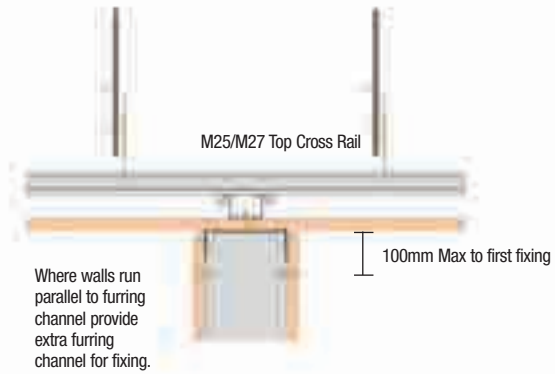


Fig. 3 Concealed Ceiling with Wall Right Angles Connection Detail

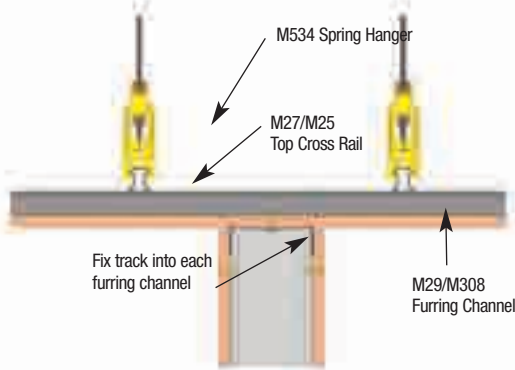


Fig. 4 Exposed T-Bar Ceiling Connection Detail

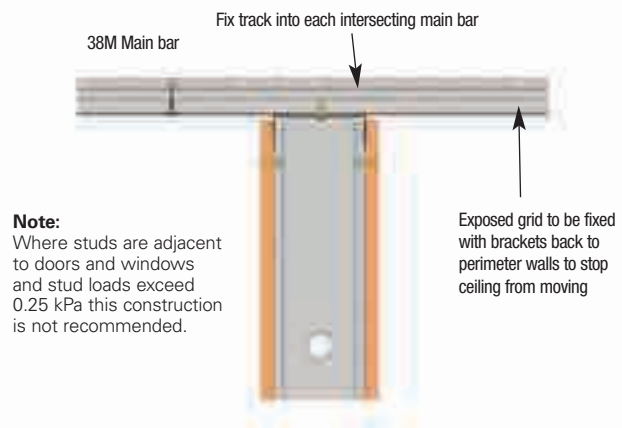


Fig. 5 Decorative Stopping Section with Wall Track Detail

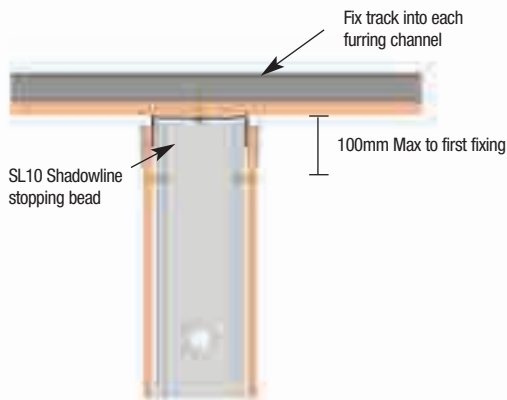
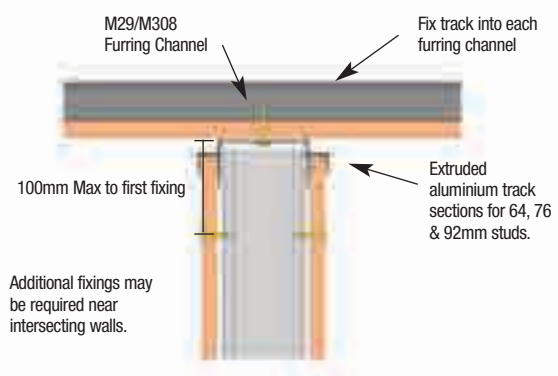


Fig. 6 Decorative Stopping Header Track Detail

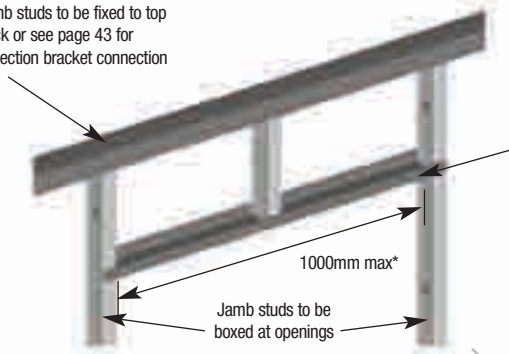


Installation Guide - Internal Stud Walls

Steel Stud Systems

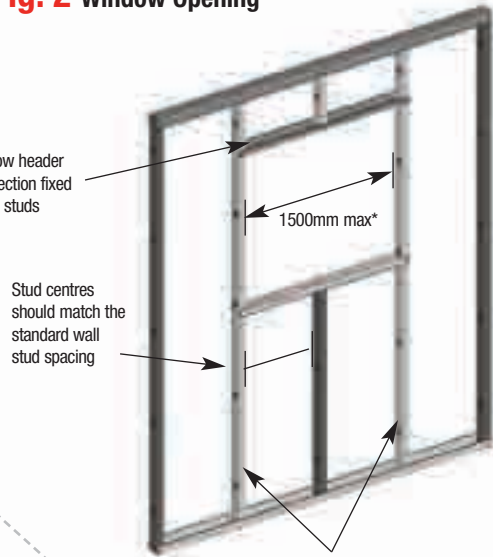
Fig. 1 Door Opening

Jamb studs to be fixed to top track or see page 43 for deflection bracket connection



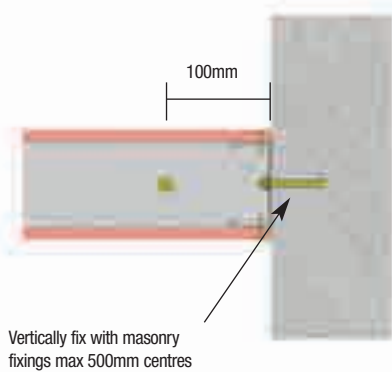
* Door openings over 1000mm and external openings must be checked prior to commencement of work.

Fig. 2 Window Opening



* Jamb studs to be boxed at openings, window openings over 1500mm and external openings must be checked prior to commencement of work.

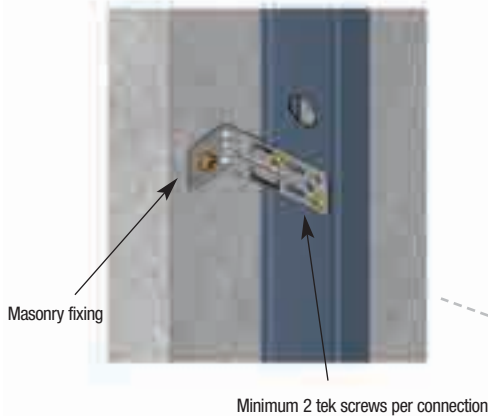
Fig. 3 Wall End Intersection to Concrete



**INTERNAL WALLS ONLY
DESIGN NOT SUITABLE
FOR EXTERIOR WALLS**

Fig. 4 Angle Bracket Connection

* Resilient mount can also be used - see page 30.



* Bracket locations should be checked prior to commencement of work

Fig. 5 Wall End

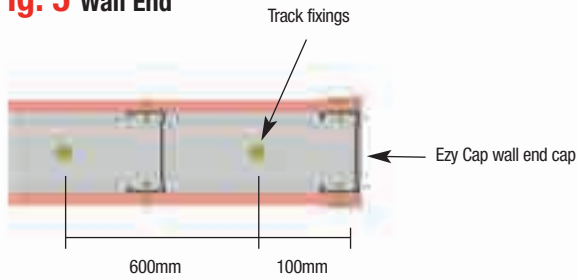


Fig. 6 Corner

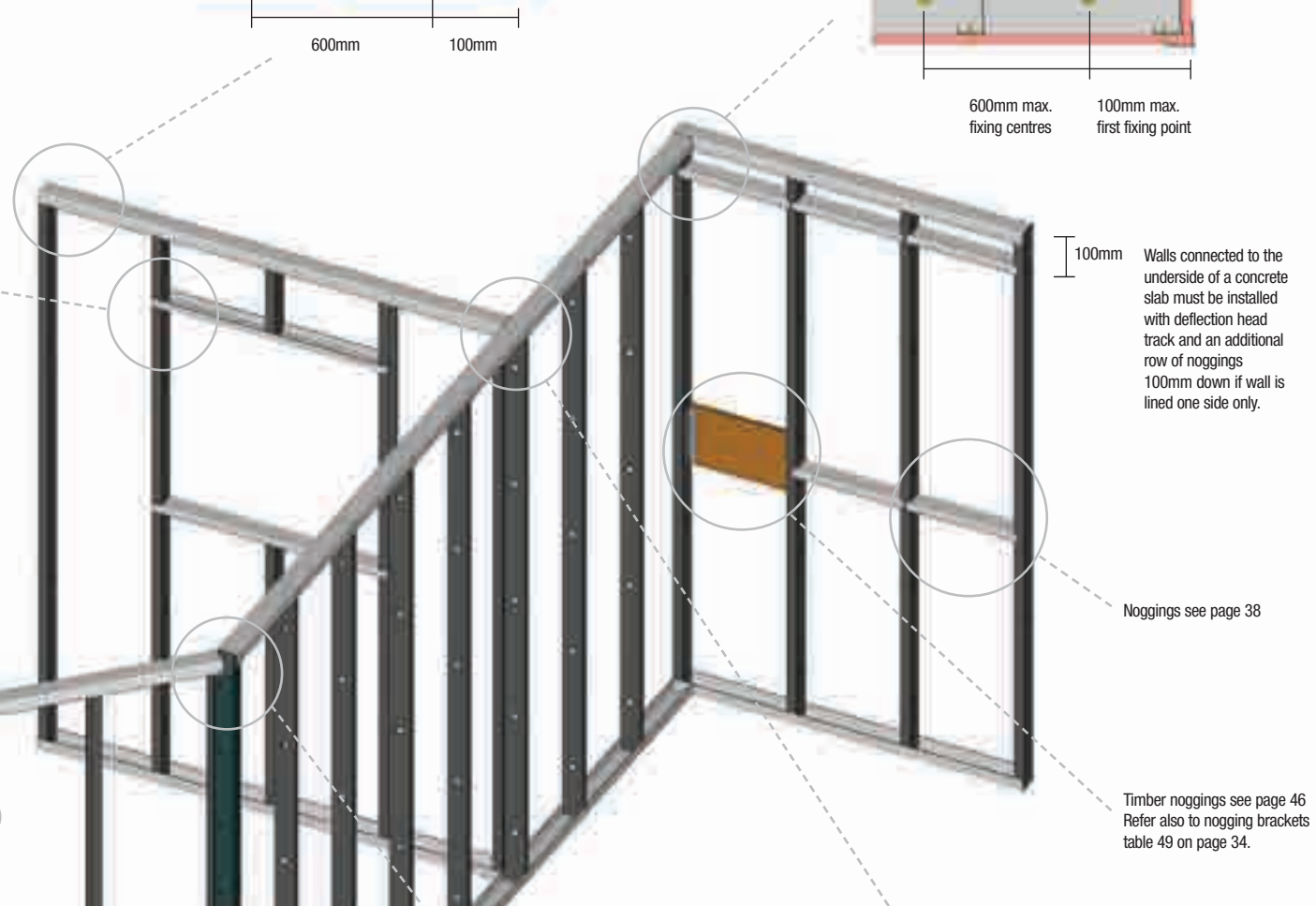
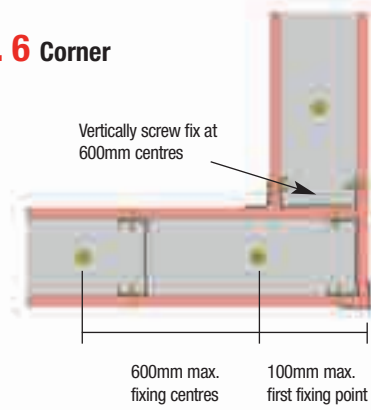


Fig. 8 Angled Wall

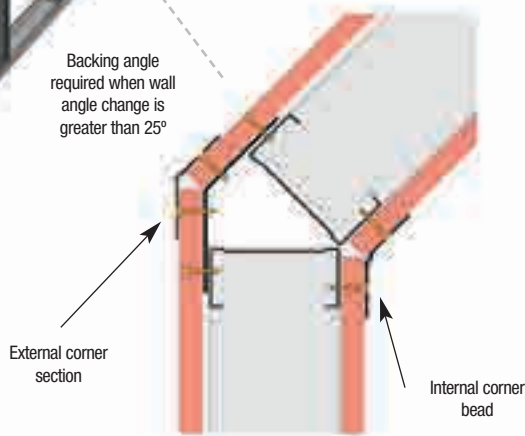
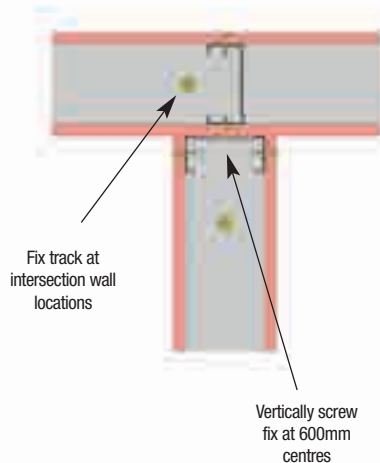


Fig. 7 Intersecting Wall



Installation Guide - Staggered Stud Walls

Staggered Stud Systems provide resistance to sound transmission and acoustic impact. Studs are held in place by using the M126 Staggered Stud Clip or M40 Wall Track as shown in Fig. 1. Refer to Table 59 for maximum wall heights.

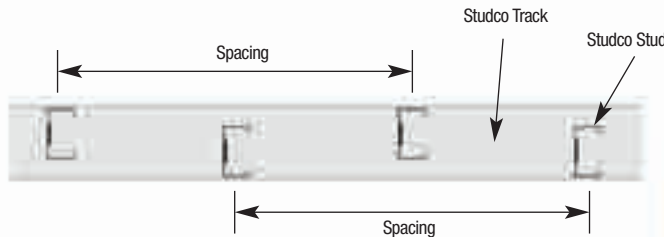


Fig. 1 Typical Staggered Stud Wall Application

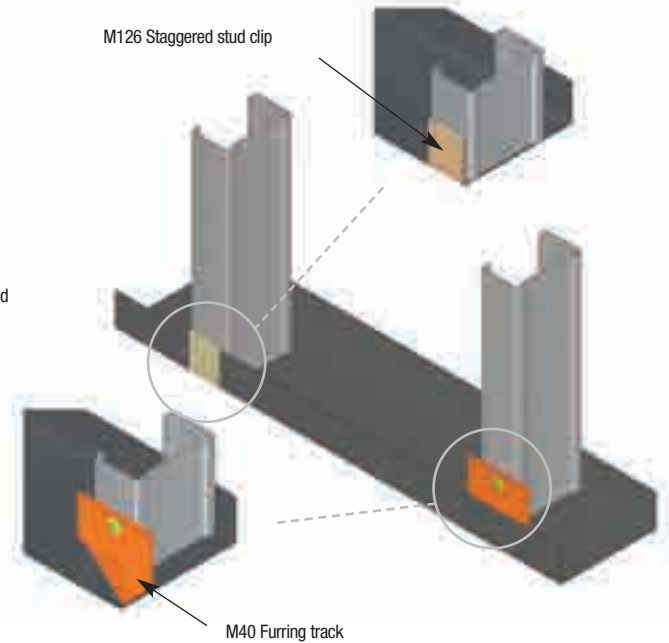


Table 59

| MAXIMUM STAGGERED STUD WALL HEIGHTS - SPAN/240 | | | | | | | | | | |
|--|-----------------|----------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|
| PLASTER THICKNESS (mm) | | 10mm PLASTERBOARD | | | 13mm PLASTERBOARD | | | 16mm PLASTERBOARD | | |
| STUD SPACING (MM) | | 300mm | 450mm | 600mm | 300mm | 450mm | 600mm | 300mm | 450mm | 600mm |
| PART NO. | STUD SIZE | MAX WALL HEIGHT (mm) | | | | | | | | |
| S51050 | 51mm x 0.50BMT | 2880 | 2510 | 2350 | 2910 | 2540 | 2340 | 2900 | 2540 | 2340 |
| S64050 | 64mm x 0.50BMT | 2930 | 2600 | 2390 | 3000 | 2660 | 2380 | 3080 | 2710 | 2380 |
| S64075 | 64mm x 0.75BMT | 3620 | 3190 | 2850 | 3720 | 3290 | 2850 | 3800 | 3370 | 2850 |
| S64115 | 64mm x 1.15BMT | 4440 | 3880 | 3530 | 4490 | 3950 | 3520 | 4520 | 3980 | 3520 |
| S76055 | 76mm x 0.55BMT | 3170 | 2810 | 2610 | 3240 | 2850 | 2620 | 3290 | 2930 | 2610 |
| S76075 | 76mm x 0.75BMT | 3750 | 3330 | 3020 | 3830 | 3390 | 3020 | 3910 | 3470 | 3020 |
| S76115 | 76mm x 1.15BMT | 4550 | 4020 | 3620 | 4670 | 4080 | 3610 | 4770 | 4180 | 3620 |
| S92055 | 92mm x 0.55BMT | 3380 | 2980 | 2750 | 3440 | 3030 | 2740 | 3500 | 3050 | 2730 |
| S92075 | 92mm x 0.75BMT | 3920 | 3490 | 3180 | 3990 | 3540 | 3210 | 4050 | 3590 | 3200 |
| S92115 | 92mm x 1.15BMT | 4660 | 4110 | 3760 | 4780 | 4180 | 3760 | 4860 | 4250 | 3760 |
| S15007 | 150mm x 0.75BMT | 4440 | 3990 | 3690 | 4480 | 4010 | 3670 | 4520 | 4050 | 3670 |
| S15012 | 150mm x 1.15BMT | 5140 | 4560 | 4160 | 5180 | 4620 | 4160 | 5230 | 4650 | 4150 |

Notes:

1. Tabulated heights can not be used for axial loads but include self weight and lateral pressures.
2. Shelf loadings are not included in the tabulated heights.
3. This table is for internal applications only.

Installation Guide - Curved Walls

Curved Walls can be easily constructed by using Studco Ezytrack. Ezytrack can be curved to suit the desired radius and screwed through the side strap to lock the radius into position. Studs are then placed into the Ezytrack and screwed both sides. The Ezytrack is fixed to the primary structure at each Stud location, top and bottom. The use of Ezytrack in bulkhead construction is a cost effective alternative as the Ezytrack can be preformed to your radius then screw locked and installed. For a guide on Stud centres for curved walls, refer to *Table 60* below.

Table 60

| STUDS CENTRES - CURVED WALLS | | | | | | | |
|------------------------------|---------------------------|---------------|---------------|---------------|---------------|---------------|-------------|
| PLASTERBOARD THICKNESS | WALL RADIUS | | | | | | |
| | 800mm-1000mm | 1000mm-1500mm | 1500mm-2000mm | 2000mm-2500mm | 2500mm-3000mm | 3000mm-4000mm | over 4000mm |
| | MAXIMUM WALL STUD CENTRES | | | | | | |
| 6.5mm | 150mm | 200mm | 250mm | 300mm | 350mm | 450mm | 550mm |
| 10mm | 150mm | 200mm | 250mm | 300mm | 350mm | 450mm | 550mm |
| 13mm | -- | 150mm | 200mm | 250mm | 300mm | 400mm | 500mm |
| 16mm | -- | -- | -- | 150mm | 200mm | 250mm | 350mm |

Fig. 1 Curved Wall

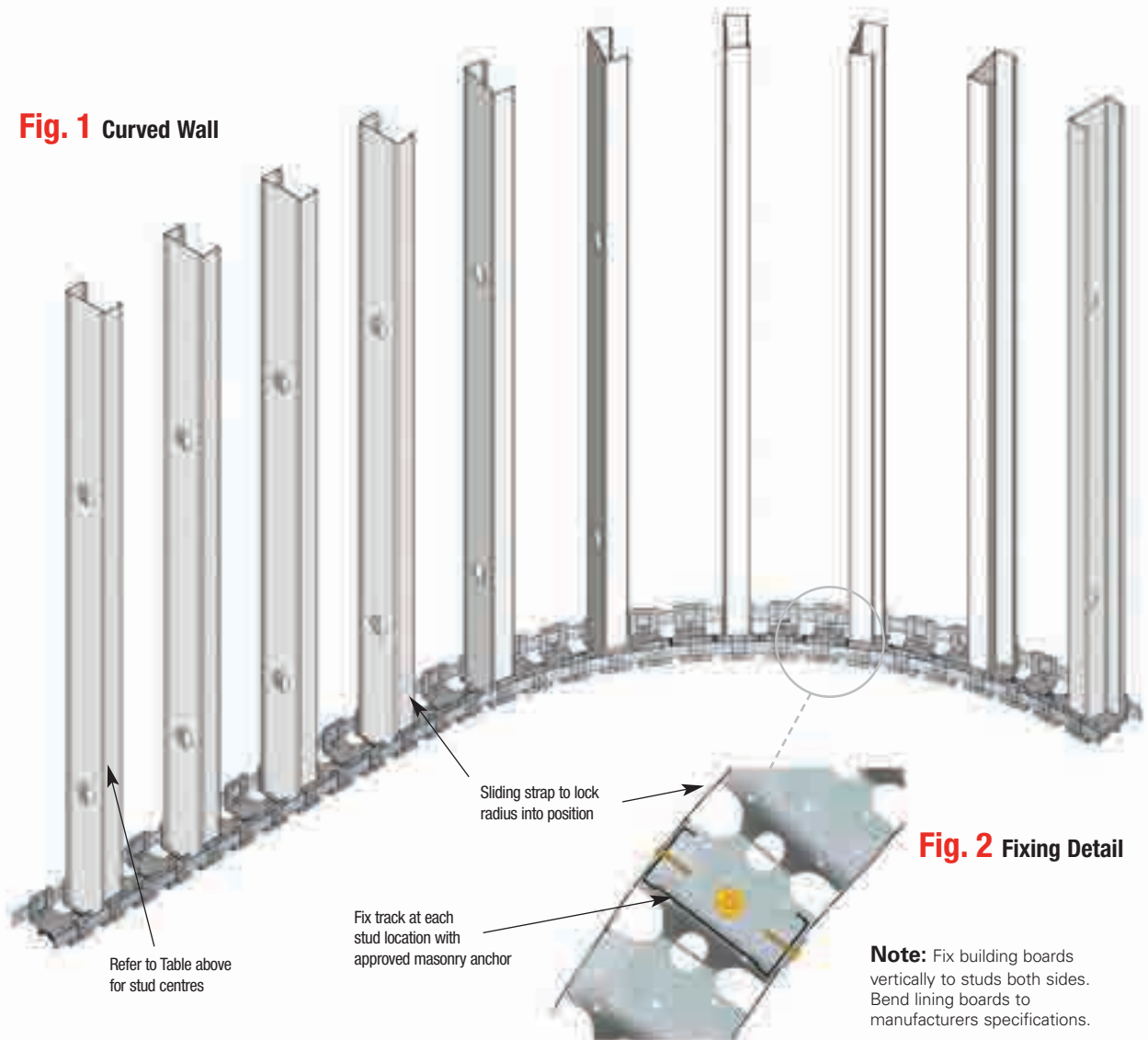


Fig. 2 Fixing Detail

Installation Guide - HEDA Tough Wall System

The HEDA System from Studco offers an fast and easy way of creating openings in walls in both internal and external applications. Traditionally, wall openings have required two or three studs at each side of the jamb and a series of studs and track to act as a lintel. Whilst this method remains highly popular, the new HEDA System from Studco uses fewer sections and fewer connections, thereby greatly decreasing construction time and simplifying the construction process. The HEDA System consists of only two items. Firstly, there is one new profile, known as the HEDAJamb, which is 92mm wide and 75mm deep, and suits the standard 92mm steel stud system from Studco. Made from galvanised steel, the HEDAJamb is available in 1.2mm and 1.6mm thicknesses, making this section extremely versatile over a vast range of opening sizes. The HEDAJamb section can be used for both the opening jambs (vertical members) and the lintels and sills (horizontal members) and it eliminates the need for using multiple studs and stud/track combinations. Secondly, to connect the HEDAJamb to adjoining members, a new bracket is used, known as the HEDAConnector. This versatile bracket is suitable for all connections required around the openings, eliminating the need for ordering different brackets for different connections.

The HEDA System has been fully engineered to meet BCA requirements and Australian Standards, ensuring you of code compliance whenever you use Studco's new HEDA System. The HEDA System is suitable for most opening applications and by discussing your needs with a Studco representative, you can be sure that even your most demanding opening specifications can be accommodated.

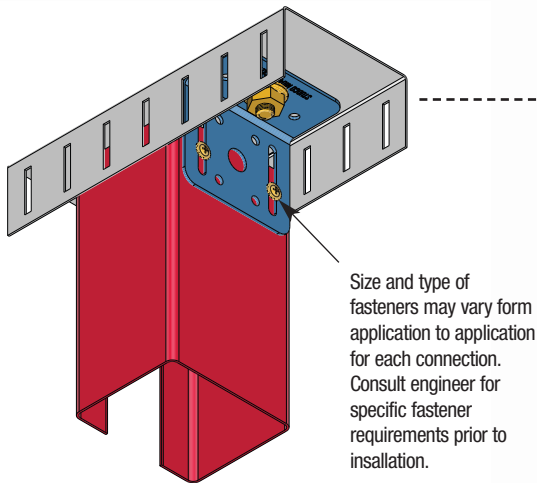


Fig. 1 Jamb Stud To Slotted Deflection Track Connection

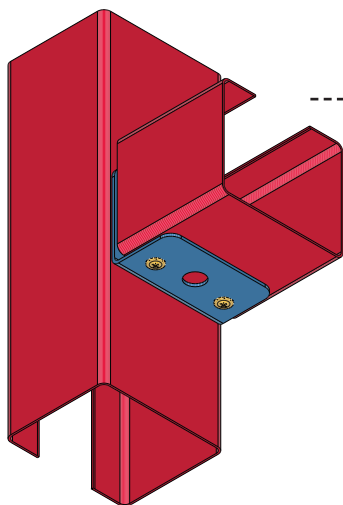


Fig. 2 Jamb Stud To Lintel/Sill Connection

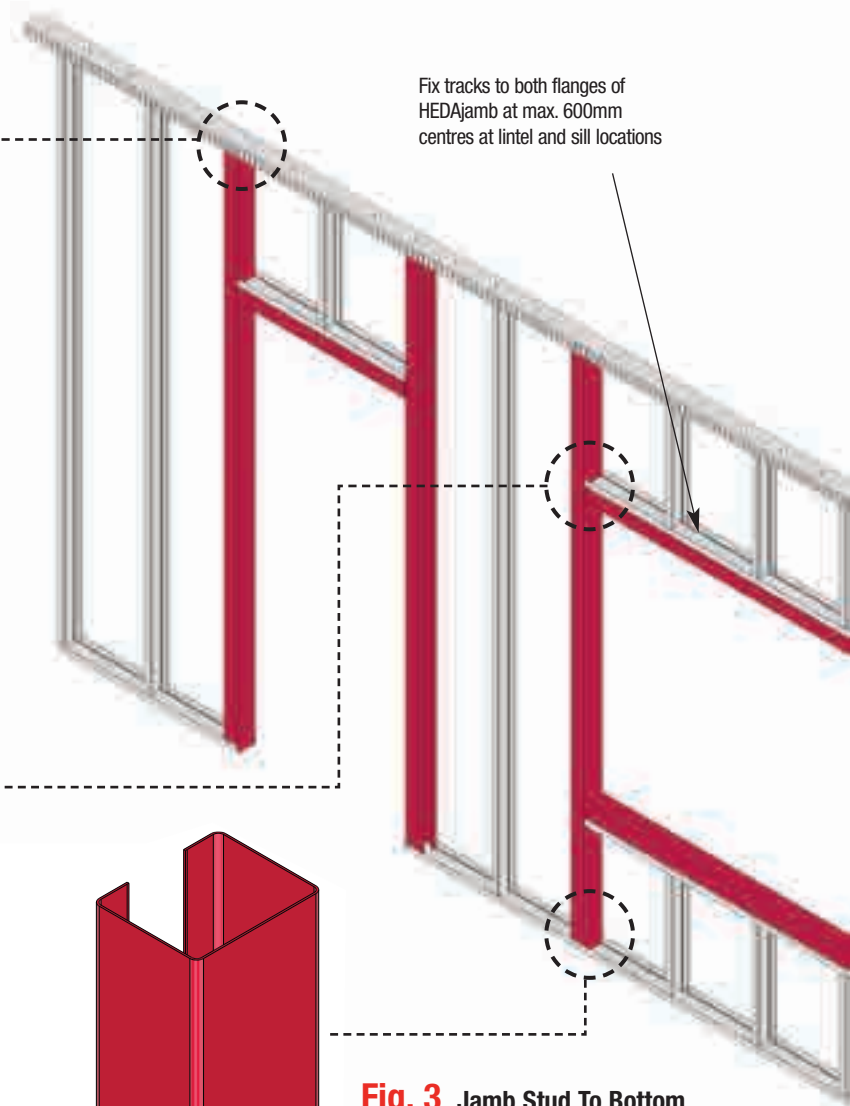


Fig. 3 Jamb Stud To Bottom Track Connection

Studco HEDAjamb is suitable for use in...



Openings in external walls



Openings in internal walls



Construction of extreme walls

Fix studs through slots to allow for building movement (deflection).

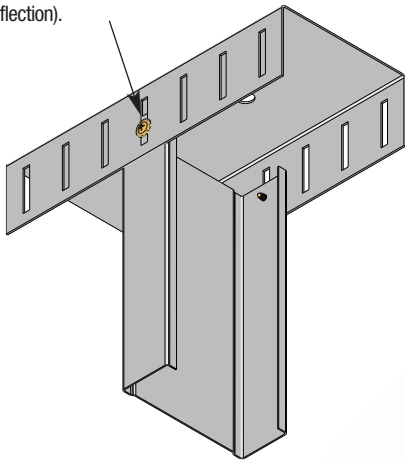
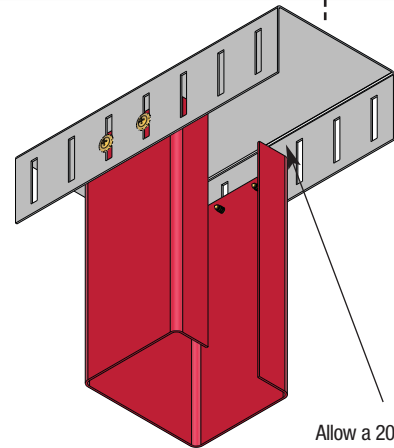


Fig. 4 Wall Stud To Slotted Deflection Track Connection
(Using std stud as wall stud)

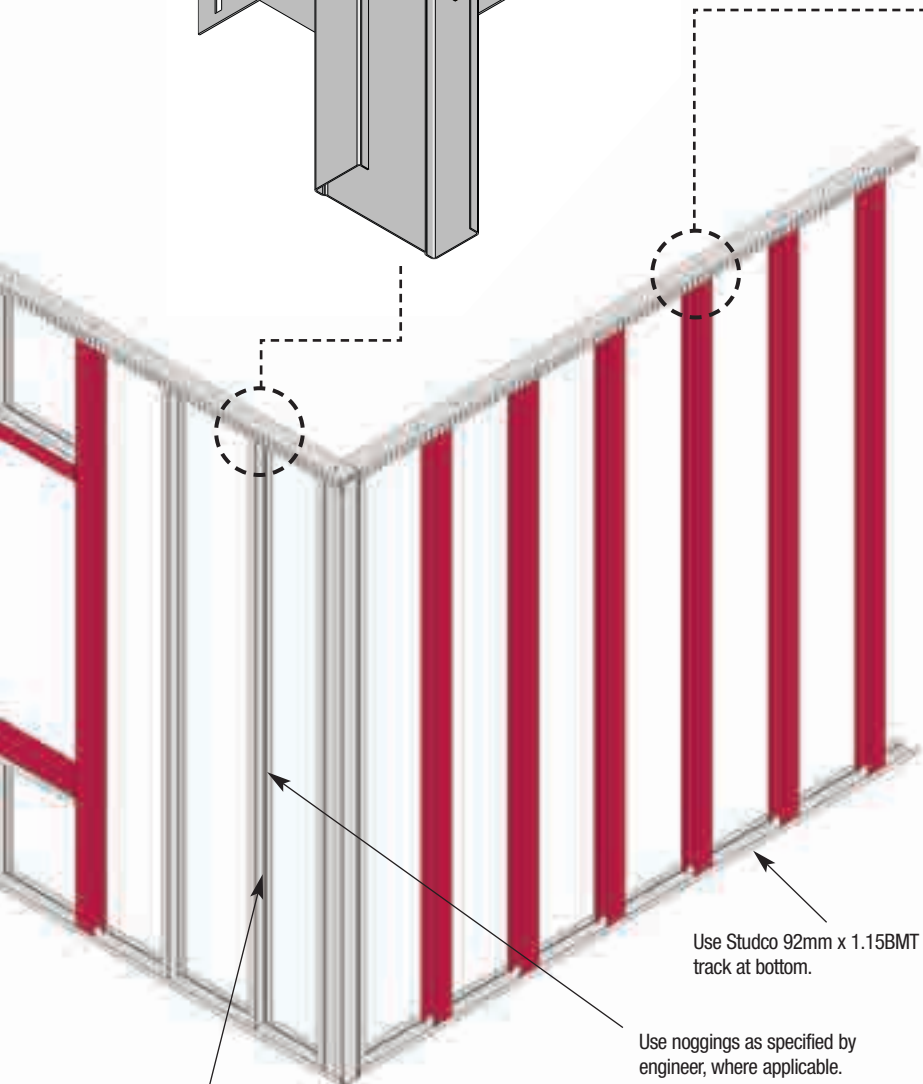
* HEDAjamb sections shown in red for illustrative purposes only.

Always ensure tightness of screw is sufficient to allow for deflection if needed.



Allow a 20mm minimum gap between wall studs or jamb studs on top track.

Fig. 5 Wall Stud To Slotted Deflection Track Connection
(Using HEDAjamb as wall stud)



Use Studco 92mm x 1.15BMT steel studs for intermediate wall studs. Consult engineer for spans and spacing.

Use Studco 92mm x 1.15BMT track at bottom.

Use noggings as specified by engineer, where applicable.

CONSULT STUDCO FOR WALL DESIGNS & SPECIFICATIONS

Installation Guide - Electrical & Plumbing Services

Plumbing pipes such as copper or brass must be isolated from direct contact with steel stud framing. Plastic grommets or lagging should be used to stop water hammer of pipework. Alternatively plumbing pipes can be fixed to flanges of studs where you have a suitable cavity with appropriate saddle clamps.

Electrical wires simply run through pre-punched service holes. Wires must be isolated safely from the steel structure. When drilling extra holes, refer to *Fig. 3* for cutout guidelines. Drilled holes should not exceed 50mm diameter.

Steel Stud Systems

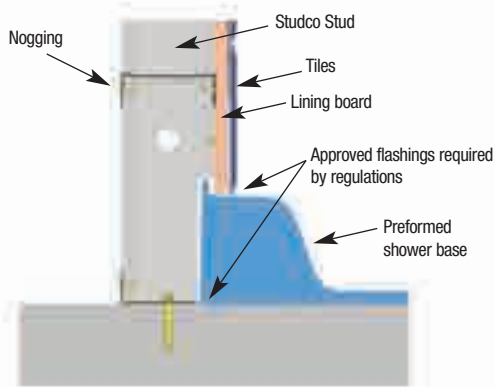


Fig. 1 Showerbase Installation Detail

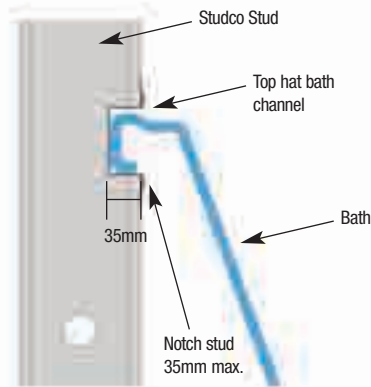


Fig. 2 Bath Notching Detail

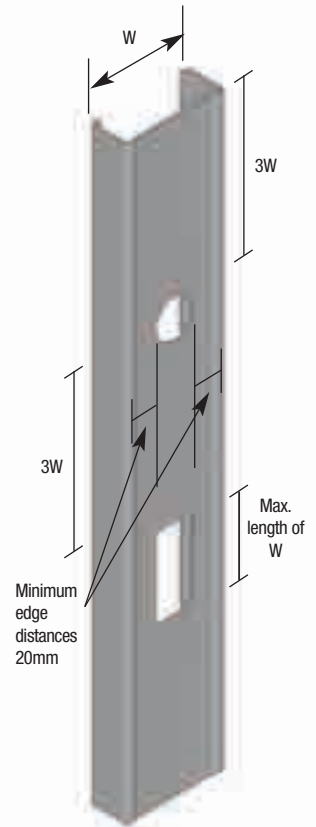


Fig. 3 Stud Cut-Out Guidelines

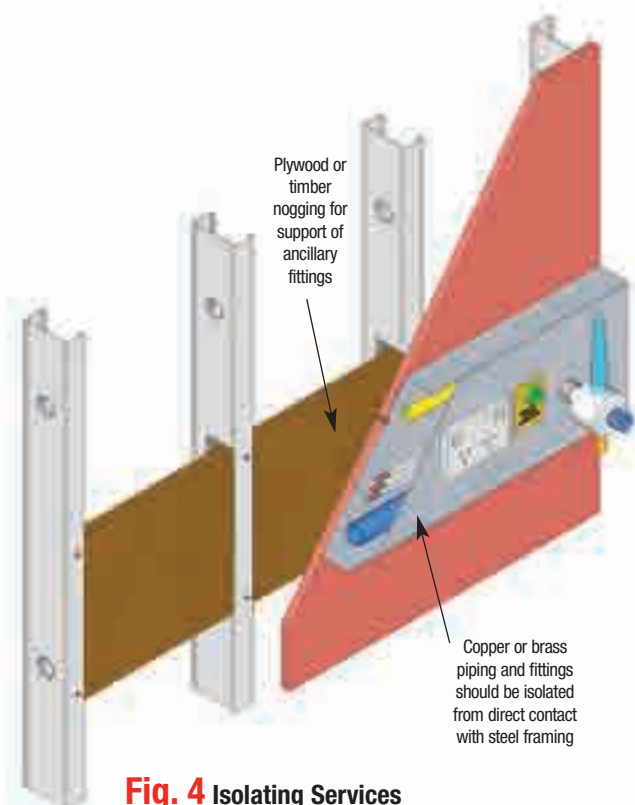


Fig. 4 Isolating Services

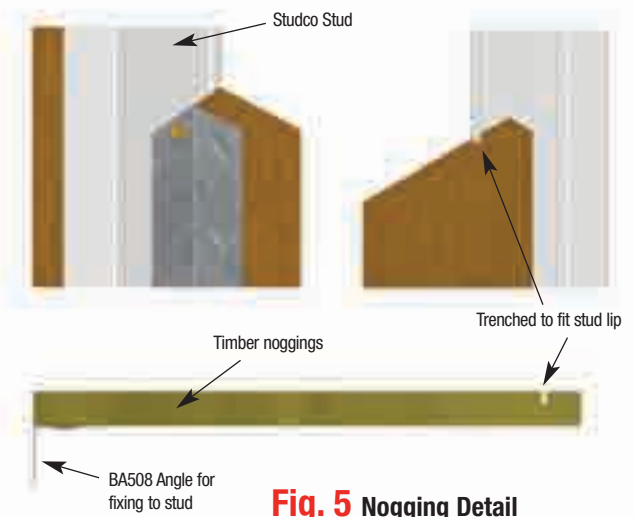


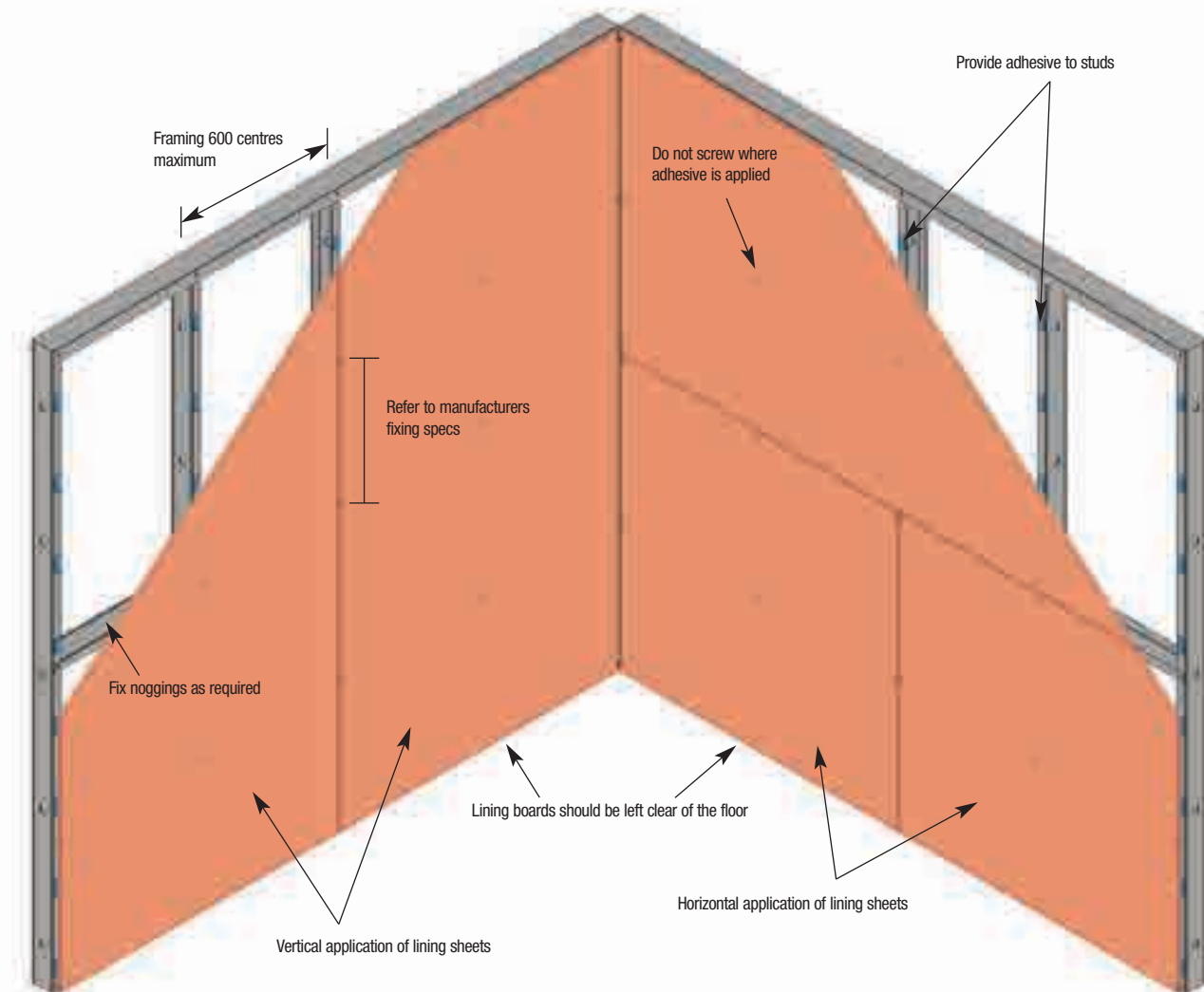
Fig. 5 Nogging Detail

Nogging brackets can also be used for this application - refer to table 49 on page 34

Installation Guide - Lining Boards

Plasterboard linings can be fixed vertically or horizontally with joints staggered alternately either side of the wall. Stud centres should not exceed 600mm centres. Refer to building board and fastener manufacturers specifications for fixing details.

Fig. 1 Lining Boards



Note:

For expansion joints, refer to building board manufacturers recommendations. Also see page 16.

Installation Guide - Chase Walls

Chase walls are required where services have to be accommodated or a discontinuous structure is needed for acoustic purposes. Chase walls are constructed as two separate walls using steel stud and track sections and cross braced at regular intervals with steel stud or track section (see Fig. 1). Where a chase wall is required for acoustic purposes the M24R resilient joiner bracket may be used as bracing. Consult Studco Technical Services for project requirements. Noggings are required based on a chase wall being classed as a wall lined one side. The maximum wall heights can be determined from Table 61.

Fig. 1 Typical Chase Wall Application

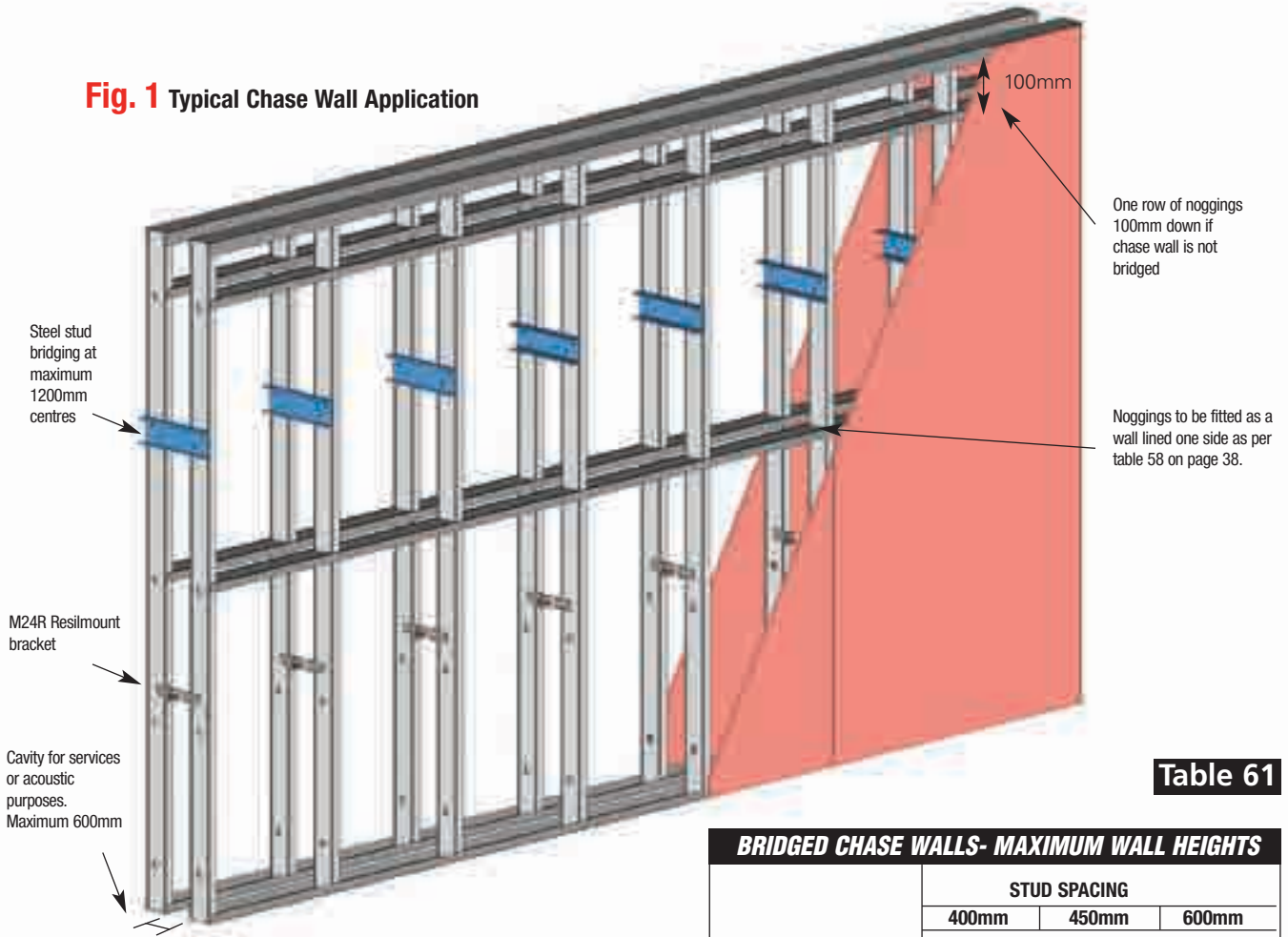


Table 61

| BRIDGED CHASE WALLS- MAXIMUM WALL HEIGHTS | | | |
|---|--------------|--------|--------|
| STUD SIZE | STUD SPACING | | |
| | 400mm | 450mm | 600mm |
| MAXIMUM WALL HEIGHTS - L/360 | | | |
| 64mm x 0.55BMT | 3715mm | 3503mm | 3033mm |
| 64mm x 0.75BMT | 5077mm | 4787mm | 4145mm |
| 76mm x 0.55BMT | 4460mm | 4205mm | 3642mm |
| 76mm x 0.75BMT | 5659mm | 5336mm | 4621mm |
| 92mm x 0.55BMT | 4987mm | 4702mm | 4072mm |
| 92mm x 0.75BMT | 6324mm | 5962mm | 5163mm |

- Notes:**
1. Noggings to be equally spaced over wall height
 2. Deflection limit limited to L/360 or L/240 at 0.25kPa in accordance with the BCA spec C1.8
 3. Unbridged walls must be installed with deflection track and an additional row of noggings 100mm down from top of wall.

Fig. 2 Max distance between walls with Resilmount brace

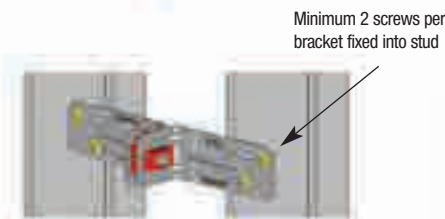
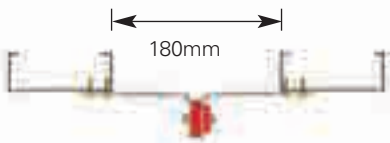


Fig. 3 Max distance between walls with Resilmount brace

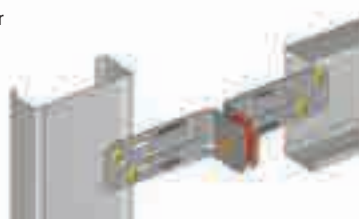


Fig. 4 Larger chase wall cavities use bridging extension.

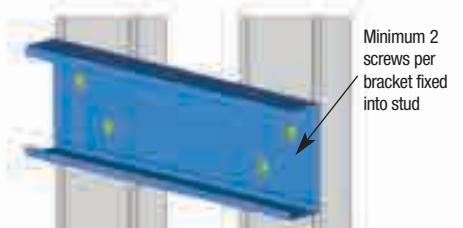


Fig. 5 Steel stud bridging

Consult Studco Engineer for project specifications.

Installation Guide - Stud Ceilings

When constructing ceilings, steel studs acting as joists can be used where it is impractical to use a concealed suspended ceiling. Applications include many areas, such as apartments, corridors and bathrooms etc. Where service hatches or access locations are within ceilings this area must be strengthened for service trades.

Refer to pages 58/59 for steel stud spans and bridging. Installation and fixing procedures refer to diagrams below.

Fig. 1 Typical Stud Ceiling Application

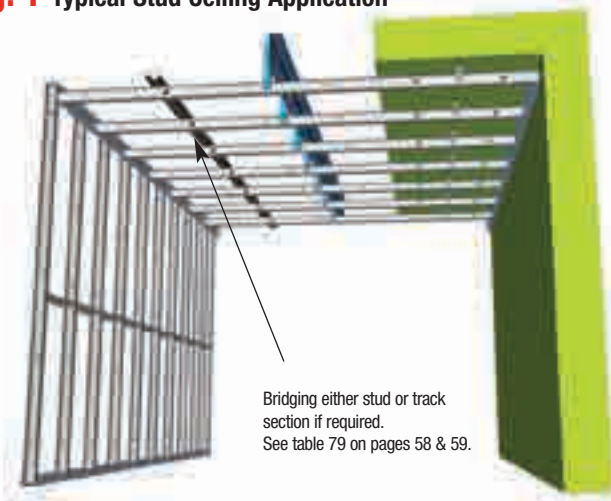


Fig. 2 Stud Joist to Wall Track Fixing Masonry

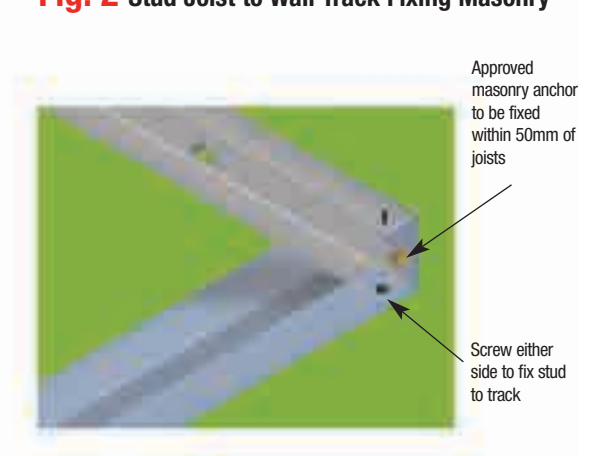


Fig. 3 Stud Joist to Wall Track Fixing

Note:
Where ceiling intersects a stud wall, the wall must be checked for the ceiling load

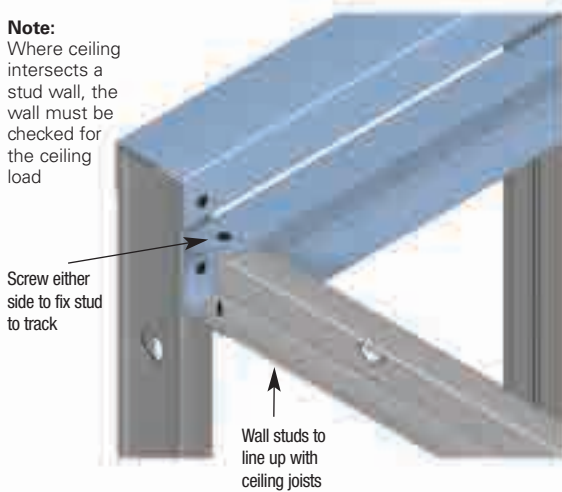


Fig. 4 Stud Joist Suspension Fixing 1

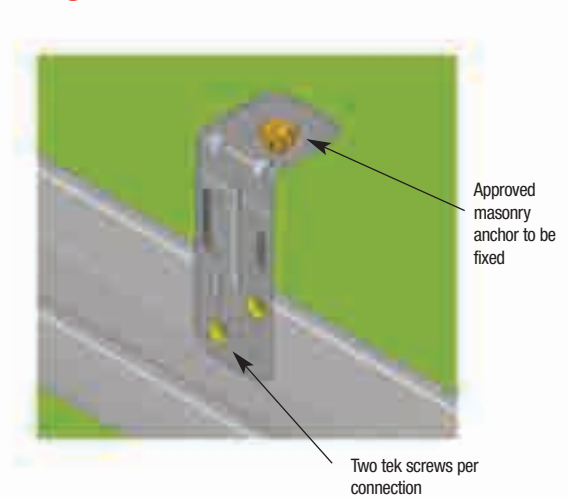
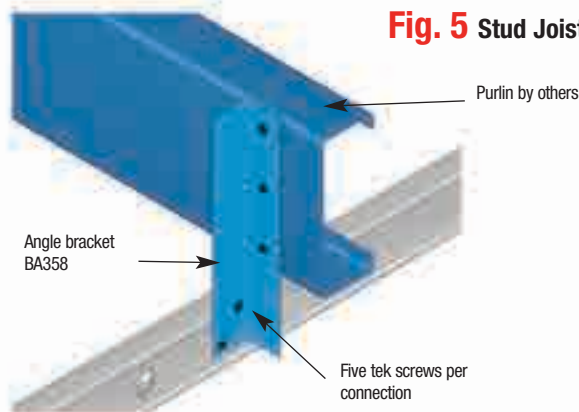


Fig. 5 Stud Joist Suspension Fixing 2



Note:
Refer to fastener manufacturers for fixings.

Note:
Fixings should be made to the web of the purlin unless otherwise approved by an engineer.

Installation Guide - Bulkheads

Bulkheads can be constructed using steel stud and track where furring channels become impractical. Bulkhead stud members will need to be fixed and braced to suitable structural supports, and ensure that the bulkheads meet required design loadings. Design loadings and specifications should be referred by a structural engineer or Studco Technical Services. An economical alternative to constructing bulkheads on-site is to use pre-fabricated modules. Studco can analyse comprehensive plans and reach innovative solutions for framing requirements with any architectural style. The possibilities include circular, curved, stepped or cantilevered framing which is easily suspended from slab or structure by using springhanger Part No. M534 subject to engineers approval. (See Fig 4). Spring hangers to be used only for preliminary suspension before bracing back to structure.

Fig. 1 Ceiling Bulkhead

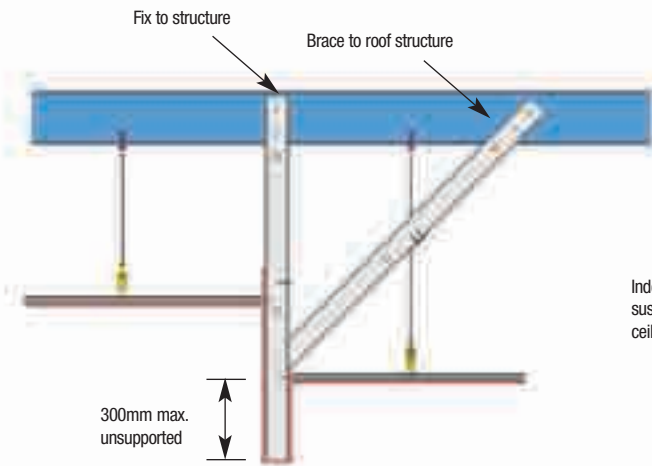


Fig. 2 Ceiling Bulkhead Bracing Detail

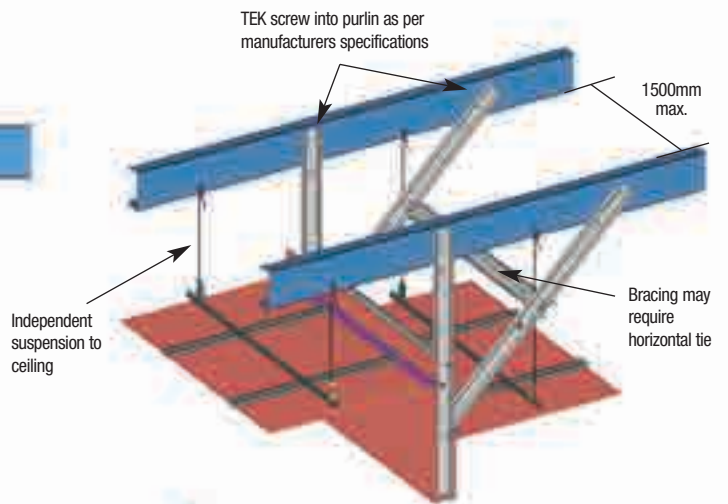


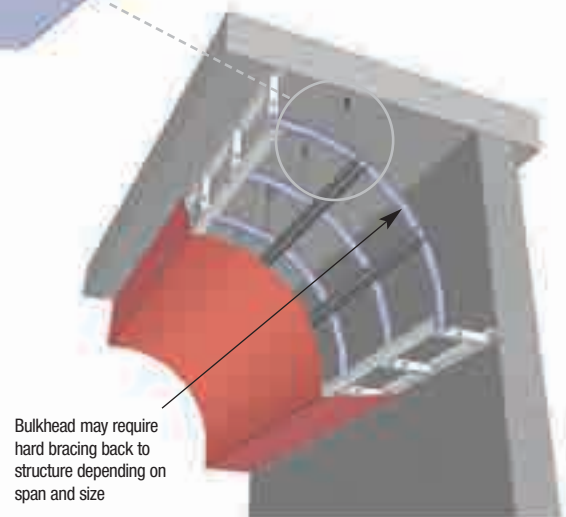
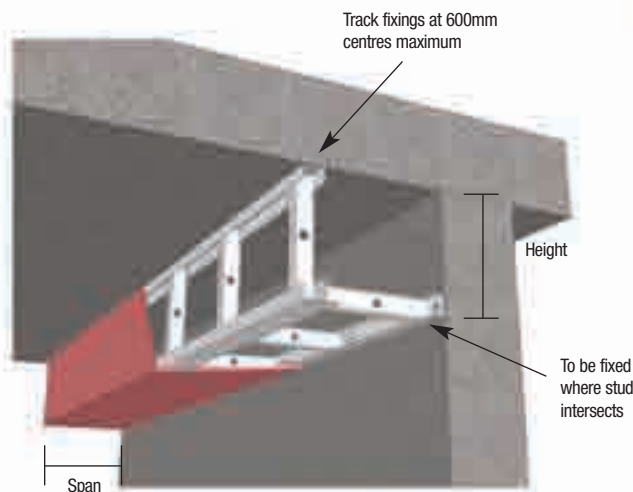
Fig. 4 M534 Spring Hanger Suspension

M534 Spring hanger can be used for preliminary bulkhead suspension for initial installation, then support with bracing back to structure



Fig. 5 Suspension of Prefabricated Bulkheads

Fig. 3 Box Bulkhead



Installation Guide - Slimwall



The Studco SLIMWALL system is a energy efficient wall system that is code compliant to NCC 2011 Section J (BCA 2011) Energy Efficiency criteria. The Studco SLIMWALL System consists of a C-channel section and a series of two brackets, designed to provide adjustable stand-off points for fixing the channel. The M163-6 SLIMWALL bracket is suitable for wall cavities 69-92mm and the M163-8 SLIMWALL bracket is suitable for wall cavities 85-108mm. Once the M163 brackets are fixed to external wall using shot pins or masonry anchors, the Studco Slimceil M355 channel are inserted into the brackets and screwed to the brackets, achieving a secure and permanent fixing which can support a wide variety of lining board types and weights. So whether you're chasing 6 Star Green Star on your next project or you just need a fast, flexible and fully code compliant wall system, choose the unique, new Studco SLIMWALL.



Studco Slimwall system used with CSR Bradford foil-faced builders blankets to achieve R2.8 rating.



Studco Slimwall system used with foilboard insulation to achieve R1.8 rating.

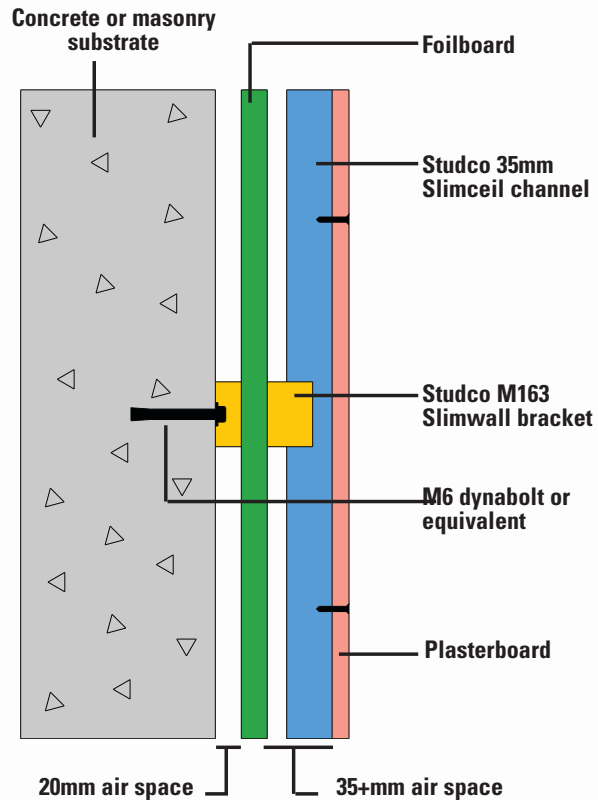


Table 62

| SLIMWALL - MIN & MAX MEASUREMENTS | | | |
|--|--------------|--|-----------------|
| PART No | BRACKET SIZE | Distance from substrate to back of plasterboard. | |
| | | Min measurement | Max measurement |
| M163-6 | 68mm | 70mm | 90mm |
| M163-8 | 84mm | 86mm | 106mm |

* This is the distance from the concrete substance and to the back face of the plasterboard lining.

Installation Guide - Strongarm



Steel Stud Systems

The Studco StrongArm™ structural wall brace is designed for rapid in-wall strengthening of free-standing steel stud walls commercial applications, where a structural member is required to limit deflection and improve rigidity. Made from 12mm thick steel and protected by a hot-dip galvanised coating, this super bracket can withstand extreme loads, is suitable for internal and external applications and is sure to save you time and money on your next project. Typical applications include; Free-standing walls, Balustrades, Nib walls, Bulkheads and Smoke baffles.

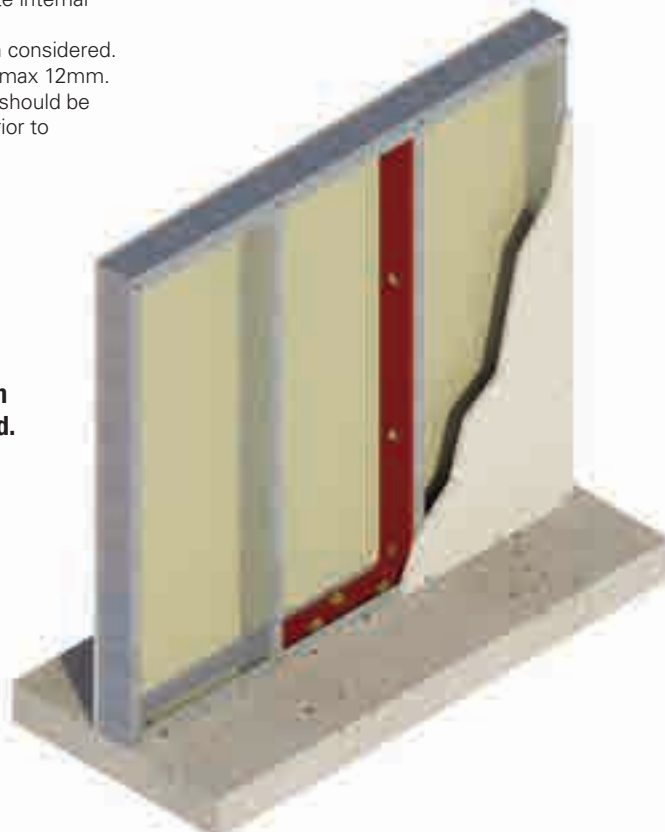
Table 63

| Wall Height | STRONGARM - BRACKET/STUD SPACING | |
|---------------|---|--|
| 600mm | Wall Stud type and Stud centres | Studco S92075 92mm x 0.75BMT lipped wall stud at 600mm centres |
| | M110 Bracket Spacing | Maximum 2400mm centers |
| 900mm | Wall Stud type and Stud centres | Studco S92075 92mm x 0.75BMT lipped wall stud at 600mm centres |
| | M110 Bracket Spacing | Maximum 1800mm centers |
| 1200mm | Wall Stud type and Stud centres | Studco S92075 92mm x 0.75BMT lipped wall stud at 600mm centres |
| | M110 Bracket Spacing | Maximum 1800mm centers |
| 1500mm | Wall Stud type and Stud centres | Studco S92115 92mm x 1.15BMT lipped wall stud at 600mm centres |
| | M110 Bracket Spacing | Maximum 1800mm centers |
| 1800mm | Wall Stud type and Stud centres | Studco S92115 92mm x 1.15BMT lipped wall stud at 450mm centres |
| | M110 Bracket Spacing | Maximum 1800mm centers |
| 2100mm | Wall Stud type and Stud centres | Studco S92115 92mm x 1.15BMT lipped wall stud at 450mm centres |
| | M110 Bracket Spacing | Maximum 1350mm centers |
| 2400mm | Wall Stud type and Stud centres | Studco S92115 92mm x 1.15BMT lipped wall stud at 450mm centres |
| | M110 Bracket Spacing | Maximum 900mm centers |

Notes:

1. Use Minimum 4No x 12mm masonry anchors with minimum 60mm embedment into concrete is required to fix the bracket to the substrate.
2. The design is for max 0.4kpa Ultimate internal pressure.
3. The Live impact load of 0.75kN been considered.
4. The absolute deflection is limited to max 12mm.
5. All specifications and design criteria should be confirmed by the project engineer prior to installation.

M110 Strongarm bracket installed.



Section Properties & Dimensions - Wall Studs

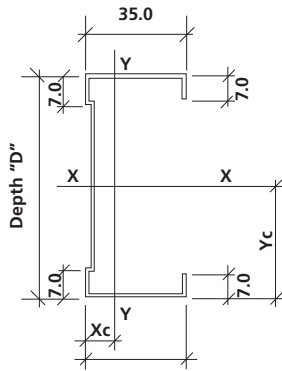
Table 64

| SECTION PROPERTIES - STUDS | | | | | | | | | | |
|----------------------------|--------|----------------------|--------------------------|--------------------------|---------------------|---------------------|-------|-------|-------------------------|-------------------|
| Section | BMT mm | Area mm ² | Ixx mm ⁴ x1E3 | Iyy mm ⁴ x1E3 | Zxx mm ³ | Zyy mm ³ | rx mm | ry mm | Iw mm ⁶ x1E6 | J mm ³ |
| S51050 | 0.50 | 63.50 | 30.618 | 11.280 | 1213 | 528 | 21.96 | 13.33 | 6.360 | 5.29 |
| S64050 | 0.50 | 70.00 | 50.016 | 12.135 | 1588 | 538 | 26.73 | 13.17 | 10.004 | 5.83 |
| S64075 | 0.75 | 105.00 | 75.024 | 18.070 | 2382 | 803 | 26.73 | 13.12 | 15.007 | 19.69 |
| S64115 | 1.15 | 161.00 | 115.037 | 27.386 | 3652 | 1222 | 26.73 | 13.04 | 23.010 | 70.97 |
| S76055 | 0.55 | 84.15 | 83.103 | 14.133 | 2196 | 600 | 31.43 | 12.96 | 16.258 | 8.49 |
| S76075 | 0.75 | 114.75 | 113.323 | 19.156 | 2994 | 815 | 31.43 | 12.92 | 22.170 | 21.52 |
| S76115 | 1.15 | 175.95 | 173.762 | 29.017 | 4591 | 1240 | 31.43 | 12.84 | 33.994 | 77.56 |
| S92055 | 0.55 | 92.95 | 127.904 | 14.972 | 2796 | 610 | 37.10 | 12.69 | 24.578 | 9.37 |
| S92075 | 0.75 | 126.75 | 174.414 | 20.288 | 3812 | 828 | 37.10 | 12.65 | 33.515 | 23.77 |
| S92115 | 1.15 | 194.35 | 267.435 | 30.718 | 5846 | 1259 | 37.10 | 12.57 | 51.390 | 85.68 |
| S15007 | 0.75 | 171.00 | 549.611 | 23.126 | 7353 | 857 | 56.69 | 11.63 | 100.832 | 32.06 |
| S15012 | 1.15 | 262.20 | 842.736 | 34.981 | 11274 | 1302 | 56.69 | 11.55 | 154.609 | 115.59 |

Material Specifications

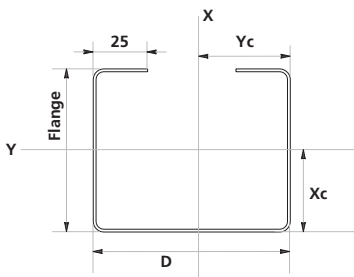
The sections are cold formed from zinc coated steel strip manufactured to AS 1397. Each component having the following properties:
Steel Grade G2
Yield strength 300 MPa

Table 65



| SECTION DIMENSIONS - STUDS | | | | | | |
|----------------------------|------|--------|------|------|-------|-------|
| Part No. | D | Flange | Lips | BMT | Xc | Yc |
| S51050 | 50.8 | 35.0 | 7.0 | 0.50 | 12.84 | 25.40 |
| S64050 | 63.5 | 35.0 | 7.0 | 0.50 | 11.75 | 31.75 |
| S64075 | 63.5 | 35.0 | 7.0 | 0.75 | 11.81 | 31.75 |
| S64115 | 63.5 | 35.0 | 7.0 | 1.15 | 11.92 | 31.75 |
| S76055 | 76.2 | 35.0 | 7.0 | 0.55 | 10.89 | 38.10 |
| S76075 | 76.2 | 35.0 | 7.0 | 0.75 | 10.95 | 38.10 |
| S76115 | 76.2 | 35.0 | 7.0 | 1.15 | 11.07 | 38.10 |
| S92055 | 92 | 35.0 | 7.0 | 0.55 | 9.92 | 46.00 |
| S92075 | 92 | 35.0 | 7.0 | 0.75 | 9.98 | 46.00 |
| S92115 | 92 | 35.0 | 7.0 | 1.15 | 10.11 | 46.00 |
| S15007 | 150 | 35.0 | 7.0 | 0.75 | 7.59 | 75.00 |
| S15012 | 150 | 35.0 | 7.0 | 1.15 | 7.73 | 75.00 |

Table 66

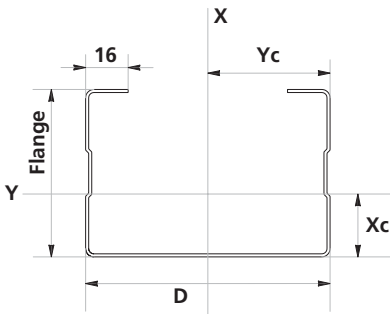


| SECTION DIMENSIONS - HEDA | | | | | | |
|---------------------------|----|--------|------|------|-------|------|
| Part No. | D | Flange | Lips | BMT | Xc | Yc |
| HJ9289155 [†] | 92 | 89.9 | 25.4 | 1.55 | 41.33 | 46.0 |

HEDA Jamb90

| FULL SECTION PROPERTIES - HEDA | | | | | | | | | | |
|--------------------------------|--------|----------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------|--------|------------------------------------|-------------------|
| Part No. | BMT mm | Area mm ² | Ixx 10 ³ mm ⁴ | Iyy 10 ³ mm ⁴ | Zxx 10 ³ mm ³ | Zyy 10 ³ mm ³ | rx mm | ry mm | Iw 10 ⁶ mm ⁶ | J mm ³ |
| HJ9289155 [†] | 1.55 | 479.69 | 730.1 | 553.5 | 15.7 | 12.03 | 39.014 | 33.968 | 1280 | 384.15 |

Table 67



| SECTION DIMENSIONS - HEDA | | | | | | |
|---------------------------|-----|--------|------|------|-------|----|
| Part No. | D | Flange | Lips | BMT | Xc | Yc |
| HJ9263150 | 92 | 63 | 16 | 1.50 | 23.65 | 46 |
| HJ15063150 | 150 | 63 | 16 | 1.50 | 19.27 | 75 |
| HJ15063115 | 150 | 63 | 16 | 1.15 | 19.34 | 75 |

HEDA Jamb63

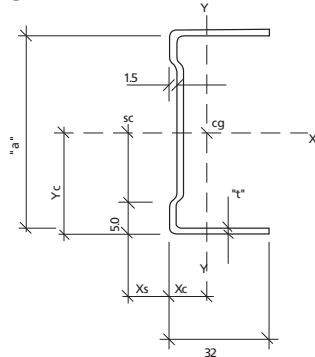
| FULL SECTION PROPERTIES - HEDA | | | | | | | | | | |
|--------------------------------|--------|----------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------|-------|------------------------------------|-------------------|
| Part No. | BMT mm | Area mm ² | Ixx 10 ³ mm ⁴ | Iyy 10 ³ mm ⁴ | Zxx 10 ³ mm ³ | Zyy 10 ³ mm ³ | rx mm | ry mm | Iw 10 ⁶ mm ⁶ | J mm ³ |
| HJ9263150 | 1.5 | 367 | 538.9 | 207.7 | 11.9 | 5.41 | 38.31 | 23.78 | 419.6 | 275 |
| HJ15063150 | 1.5 | 454 | 1637.7 | 244.6 | 22.05 | 5.72 | 60.05 | 23.21 | 1131.9 | 341 |
| HJ15063115 | 1.15 | 350 | 1268.2 | 192 | 17.04 | 4.46 | 60.21 | 23.43 | 889.5 | 154 |

Notes:

1. Section properties are approximate only and may be subject to revision.
2. Section properties tabulated are gross section properties.
3. The strength and serviceability section capacities are based on effective section properties calculated in accordance with AS 4600 "Cold Formed Steel Structures Code".
4. *Steel Grade G450. †Steel Grade G300. Jamb90 Steel Grade G300.

Section Properties & Dimensions - Track

C Channel Track



Material Specifications

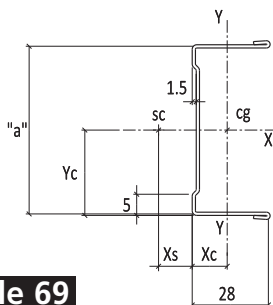
The sections are cold formed from zinc coated steel strip manufactured to AS 1397. Each component having the following properties

Steel Grade G2
Yield strength 300 MPa
Coating class Z275

Table 68

| C CHANNEL TRACK | | | | | | | | | | | | | | | | |
|------------------------|------|----|------|-------|------------|--------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-------|-------------|------|------------------|------------------|---------------------------------|
| Dimensions | | | | | Gross Area | 2nd Moment of Area | | Section Modulus | | Radius of Gyration | | Form Factor | B | Torsion Constant | Warping Constant | |
| a | BMT | t | Xc | Xs | Xo | | Ixx | Iyy | Zxx | Zyy | rxx | ryy | Q | | J | Iw |
| mm | mm | mm | mm | mm | mm | mm ² | 10 ³ mm ⁴ | 10 ³ mm ⁴ | 10 ³ mm ³ | 10 ³ mm ³ | mm | mm | | mm | mm ⁴ | 10 ⁶ mm ⁶ |
| 51 | 0.55 | | 8.53 | 11.53 | 20.06 | 61.05 | 27.880 | 5.323 | 1.072 | 0.244 | 21.37 | 9.34 | 0.47 | 62.73 | 6.16 | 2.66 |
| 64 | 0.55 | | 7.92 | 10.92 | 18.84 | 67.10 | 46.22 | 5.644 | 1.422 | 0.252 | 26.25 | 9.17 | 0.44 | 69.94 | 6.77 | 4.49 |
| 76 | 0.55 | | 7.25 | 10.36 | 17.61 | 74.8 | 70.325 | 5.903 | 1.803 | 0.256 | 30.66 | 8.88 | 0.40 | 81.35 | 7.54 | 6.89 |
| 92 | 0.55 | | 6.64 | 9.75 | 16.39 | 83.60 | 108.79 | 6.129 | 2.314 | 0.260 | 36.07 | 8.59 | 0.36 | 97.83 | 8.43 | 10.67 |
| 51 | 0.75 | | 8.48 | 11.50 | 19.98 | 83.25 | 37.59 | 7.216 | 1.445 | 0.329 | 21.25 | 9.31 | 0.58 | 62.55 | 15.61 | 3.56 |
| 64 | 0.75 | | 7.88 | 10.88 | 18.76 | 91.50 | 62.43 | 7.652 | 1.921 | 0.340 | 26.12 | 9.15 | 0.55 | 69.72 | 17.16 | 6.02 |
| 76 | 0.75 | | 7.21 | 10.33 | 17.53 | 102.0 | 95.108 | 8.006 | 2.438 | 0.345 | 30.54 | 8.86 | 0.50 | 81.09 | 19.13 | 9.25 |
| 92 | 0.75 | | 6.61 | 9.72 | 16.32 | 114.0 | 147.28 | 8.359 | 3.133 | 0.351 | 35.94 | 8.56 | 0.45 | 97.51 | 21.38 | 14.35 |
| 150 | 0.75 | | 5.16 | 7.95 | 13.12 | 159.0 | 485.87 | 9.208 | 6.309 | 0.365 | 55.28 | 7.61 | 0.33 | 186.41 | 29.81 | 45.58 |
| 51 | 1.0 | | 8.42 | 11.45 | 19.87 | 111.0 | 49.419 | 9.551 | 1.900 | 0.432 | 21.1 | 9.28 | 0.70 | 62.30 | 37.00 | 4.65 |
| 64 | 1.0 | | 7.82 | 10.83 | 18.65 | 122.0 | 82.261 | 10.131 | 2.531 | 0.446 | 25.97 | 9.11 | 0.67 | 69.45 | 40.67 | 7.87 |
| 76 | 1.0 | | 7.16 | 10.28 | 17.44 | 136.0 | 125.497 | 10.602 | 3.217 | 0.454 | 30.38 | 8.83 | 0.61 | 80.75 | 45.33 | 12.11 |
| 92 | 1.0 | | 6.56 | 9.61 | 16.23 | 152.0 | 194.602 | 11.071 | 4.140 | 0.462 | 35.78 | 8.53 | 0.56 | 97.09 | 50.67 | 18.81 |
| 150 | 1.0 | | 5.13 | 7.91 | 13.04 | 212.0 | 643.75 | 12.200 | 8.360 | 0.480 | 55.10 | 7.59 | 0.42 | 185.53 | 70.67 | 59.86 |
| 76 | 1.15 | | 7.13 | 10.25 | 17.38 | 156.4 | 143.42 | 12.143 | 3.677 | 0.577 | 30.28 | 8.81 | 0.68 | 80.54 | 68.95 | 13.76 |
| 92 | 1.15 | | 6.54 | 9.64 | 16.18 | 174.8 | 222.57 | 12.681 | 4.735 | 0.527 | 35.68 | 8.52 | 0.62 | 96.83 | 77.06 | 21.40 |
| 150 | 1.15 | | 5.11 | 7.89 | 13.00 | 243.8 | 737.52 | 13.97 | 9.578 | 0.548 | 55.00 | 7.57 | 0.46 | 184.99 | 107.48 | 68.22 |

C Channel Hemmed Track



Material Specifications

The sections are cold formed from zinc coated steel strip manufactured to AS 1397. Each component having the following properties

Steel Grade G2
Yield strength 300 MPa
Coating class Z275

Table 69

| C CHANNEL HEMMED TRACK | | | | | | | | | | | | | | | |
|-------------------------------|-----|------|-------|--------|-----------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------|------|--------|------------------|---------------------------------|--|
| Dimensions | | | | | Gross Area | 2nd Moment of Area | | Section Modulus | | Radius of Gyration | | By | Torsion Constant | Wrapping Constant | |
| a | BMT | Xc | Xs | Xo | | Ixx | Iyy | Zxx | Zyy | rxx | ryy | | J | Iw | |
| mm | mm | mm | mm | mm | mm ² | 10 ³ mm ⁴ | 10 ³ mm ⁴ | 10 ³ mm ³ | 10 ³ mm ³ | mm | mm | mm | mm ⁴ | 10 ⁶ mm ⁶ | |
| 64 | 0.5 | 8.28 | 8.13 | 16.41 | 63.24 | 43.267 | 5.043 | 1.331 | 0.271 | 26.16 | 8.93 | 69.88 | 5.3 | 3.42 | |
| 76 | 0.5 | 7.74 | 7.6 | 15.34 | 69.24 | 63.818 | 5.255 | 1.658 | 0.275 | 30.36 | 8.71 | 81.58 | 5.79 | 5.07 | |
| 92 | 0.5 | 7.15 | 6.973 | 14.123 | 77.24 | 99.05 | 5.486 | 2.130 | 0.279 | 35.81 | 8.43 | 104.57 | 6.46 | 7.89 | |

Notes:

- Section properties are approximate only and may be subject to revision.
- Section properties tabulated are gross section properties.
- The strength and serviceability section capacities are based on effective section properties calculated in accordance with AS 4600 "Cold Formed Steel Structures Code".

Section Properties & Dimensions - Deflection Track

Deflection Head Track

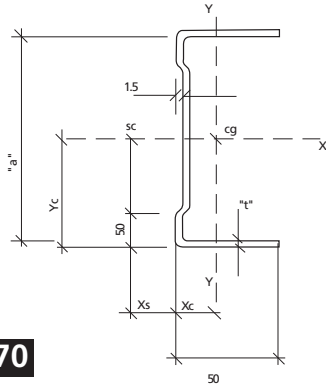


Table 70

Material Specifications

The sections are cold formed from zinc coated steel strip manufactured to AS 1397. Each component having the following properties

Steel Grade G2
 Yield strength 300 MPa
 Coating class Z275

| DEFLECTION HEAD TRACK | | | | | | | | | | | | | | | | |
|-----------------------|------|-------|-------|-------|------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------|-------|-------------|--------|------------------|---------------------------------|--|
| Dimensions | | | | | Gross Area | 2nd Moment of Area | | Section Modulus | | Radius of Gyration | | Form Factor | By | Torsion Constant | Warping Constant | |
| a | BMT | t | Xc | Xs | Xo | lxx | lyy | Zxx | Zyy | rxx | ryy | Q | mm | J | Iw | |
| mm | mm | mm | mm | mm | mm | 10 ³ mm ⁴ | 10 ³ mm ⁴ | 10 ³ mm ³ | 10 ³ mm ³ | mm | mm | | | mm ⁴ | 10 ⁶ mm ⁶ | |
| 64 | 0.55 | 15.91 | 20.73 | 36.65 | 90.2 | 68.761 | 23.819 | 2.128 | 0.693 | 27.61 | 16.25 | 0.33 | 96.61 | 9.10 | 18.22 | |
| 76 | 0.55 | 14.94 | 20.04 | 34.97 | 96.8 | 102.200 | 25.138 | 2.640 | 0.711 | 32.49 | 16.11 | 0.31 | 101.6 | 9.76 | 27.59 | |
| 92 | 0.55 | 13.81 | 19.24 | 33.05 | 105.6 | 154.760 | 26.530 | 3.320 | 0.727 | 38.28 | 15.85 | 0.29 | 110.60 | 10.65 | 42.51 | |
| 150 | 0.55 | 11.05 | 16.77 | 27.81 | 136.4 | 469.750 | 30.150 | 6.215 | 0.768 | 58.69 | 14.87 | 0.23 | 162.53 | 13.75 | 132.0 | |
| 64 | 0.75 | 15.98 | 20.77 | 36.76 | 123.0 | 94.550 | 32.610 | 2.910 | 0.948 | 27.73 | 16.28 | 0.41 | 96.69 | 23.06 | 25.16 | |
| 76 | 0.75 | 15.00 | 20.08 | 35.08 | 132.0 | 140.33 | 34.414 | 3.615 | 0.972 | 32.61 | 16.15 | 0.39 | 101.69 | 24.75 | 38.05 | |
| 92 | 0.75 | 13.88 | 19.27 | 33.15 | 144.0 | 212.37 | 36.32 | 4.54 | 0.994 | 38.40 | 15.88 | 0.36 | 110.69 | 27.00 | 58.57 | |
| 150 | 0.75 | 11.09 | 16.81 | 27.90 | 186.0 | 643.42 | 41.59 | 8.493 | 1.050 | 58.82 | 14.89 | 0.29 | 162.64 | 34.88 | 181.00 | |
| 64 | 1.0 | 16.07 | 20.82 | 36.89 | 164.0 | 127.410 | 43.720 | 3.89 | 1.270 | 27.89 | 16.33 | 0.50 | 96.79 | 54.67 | 34.07 | |
| 76 | 1.0 | 15.09 | 20.12 | 35.21 | 176.0 | 188.830 | 46.110 | 4.830 | 1.302 | 32.75 | 16.19 | 0.48 | 101.79 | 58.67 | 51.46 | |
| 92 | 1.0 | 13.95 | 19.32 | 33.27 | 192.0 | 285.42 | 48.65 | 6.072 | 1.331 | 38.56 | 15.92 | 0.45 | 110.81 | 64.00 | 79.11 | |
| 150 | 1.0 | 11.15 | 16.85 | 28.00 | 248.0 | 862.638 | 55.243 | 11.35 | 1.403 | 58.98 | 14.93 | 0.36 | 162.77 | 82.67 | 244.0 | |
| 64 | 1.15 | 16.13 | 20.85 | 36.97 | 188.0 | 147.44 | 50.43 | 4.480 | 1.460 | 27.96 | 16.35 | 0.56 | 96.84 | 83.14 | 39.56 | |
| 76 | 1.15 | 15.14 | 20.15 | 35.29 | 202.4 | 218.34 | 53.19 | 5.562 | 1.500 | 32.84 | 16.21 | 0.53 | 101.85 | 89.22 | 59.68 | |
| 92 | 1.15 | 14.00 | 19.35 | 33.35 | 220.80 | 329.78 | 56.10 | 6.990 | 1.533 | 38.650 | 15.94 | 0.50 | 110.86 | 97.34 | 91.68 | |
| 150 | 1.15 | 11.19 | 16.88 | 28.07 | 285.20 | 995.319 | 63.69 | 13.070 | 1.617 | 59.08 | 14.94 | 0.40 | 162.85 | 125.73 | 283.0 | |

Deflection Head Hemmed Track

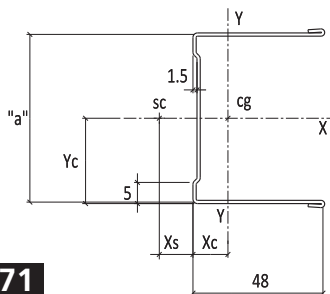


Table 71

Material Specifications

The sections are cold formed from zinc coated steel strip manufactured to AS 1397. Each component having the following properties

Steel Grade G2
 Yield strength 300 MPa
 Coating class Z275

| DEFLECTION HEAD HEMMED TRACK | | | | | | | | | | | | | | | |
|------------------------------|-----|-------|-------|-------|-----------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------|-------|--------|------------------|---------------------------------|--|
| Dimensions | | | | | Gross Area | 2nd Moment of Area | | Section Modulus | | Radius of Gyration | | By | Torsion Constant | Warping Constant | |
| a | BMT | Xc | Xs | Xo | mm ² | lxx | lyy | Zxx | Zyy | rxx | ryy | mm | J | Iw | |
| mm | mm | mm | mm | mm | mm ² | 10 ³ mm ⁴ | 10 ³ mm ⁴ | 10 ³ mm ³ | 10 ³ mm ³ | mm | mm | mm | mm ⁴ | 10 ⁶ mm ⁶ | |
| 64 | 0.7 | 14.15 | 18.57 | 32.72 | 132.44 | 93.371 | 31.82 | 2.855 | 2.435 | 26.55 | 15.50 | 87.85 | 18.87 | 19.4 | |
| 76 | 0.7 | 13.12 | 17.99 | 31.11 | 144.63 | 137.059 | 33.465 | 3.542 | 2.384 | 30.78 | 15.21 | 92.44 | 20.24 | 28.7 | |
| 92 | 0.7 | 12 | 17.22 | 29.22 | 160.88 | 211.66 | 35.271 | 4.532 | 2.337 | 36.27 | 14.81 | 100.95 | 22.07 | 44.4 | |

Notes:

- Section properties are approximate only and may be subject to revision.
- Section properties tabulated are gross section properties.
- The strength and serviceability section capacities are based on effective section properties calculated in accordance with AS 4600 "Cold Formed Steel Structures Code".

Span Tables - Internal Stud Wall Heights

Plasterboard

Table 72

| MAXIMUM WALL HEIGHTS - LINING BOTH SIDES L/240 | | | | | | | | | | |
|---|-----------------|----------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|
| PLASTER THICKNESS (mm) | | 10mm PLASTERBOARD | | | 13mm PLASTERBOARD | | | 16mm PLASTERBOARD | | |
| STUD SPACING (mm) | | 300mm | 450mm | 600mm | 300mm | 450mm | 600mm | 300mm | 450mm | 600mm |
| PART NO. | STUD SIZE | MAX WALL HEIGHT (mm) | | | | | | | | |
| S51050 | 51mm x 0.50BMT | 3400 | 3050 | 2790 | 3730 | 3450 | 3195 | 3830 | 3550 | 3350 |
| S64050 | 64mm x 0.50BMT | 3980 | 3630 | 3400 | 4270 | 3990 | 3700 | 4460 | 4130 | 3900 |
| S64075 | 64mm x 0.75BMT | 4550 | 4150 | 3900 | 4750 | 4400 | 4200 | 4930 | 4600 | 4350 |
| S64115 | 64mm x 1.15BMT | 4940 | 4460 | 4180 | 5100 | 4680 | 4400 | 5260 | 4820 | 4550 |
| S76055 | 76mm x 0.55BMT | 4530 | 4050 | 3730 | 4850 | 4450 | 4160 | 5060 | 4600 | 4300 |
| S76075 | 76mm x 0.75BMT | 5250 | 4750 | 4450 | 5650 | 5250 | 4920 | 5850 | 5460 | 5100 |
| S76115 | 76mm x 1.15BMT | 5690 | 5070 | 4670 | 6030 | 5530 | 5180 | 6220 | 5690 | 5400 |
| S92055 | 92mm x 0.55BMT | 5350 | 4870 | 4560 | 5640 | 5210 | 4850 | 5850 | 5460 | 5100 |
| S92075 | 92mm x 0.75BMT | 5920 | 5280 | 4850 | 6250 | 5750 | 5480 | 6490 | 6050 | 5650 |
| S92115 | 92mm x 1.15BMT | 6400 | 5650 | 5150 | 6720 | 6180 | 5770 | 6930 | 6380 | 5950 |
| S15007 | 150mm x 0.75BMT | 7850 | 7160 | 6590 | 8140 | 7560 | 6750 | 8250 | 7670 | 7290 |
| S15012 | 150mm x 1.15BMT | 8590 | 7760 | 7280 | 8760 | 8040 | 7590 | 8900 | 8180 | 7710 |

Table 73

| MAXIMUM WALL HEIGHTS - LINING ONE SIDE L/240 | | | | | | | | | | |
|---|-----------------|----------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|
| PLASTER THICKNESS (mm) | | 10mm PLASTERBOARD | | | 13mm PLASTERBOARD | | | 16mm PLASTERBOARD | | |
| STUD SPACING (mm) | | 300mm | 450mm | 600mm | 300mm | 450mm | 600mm | 300mm | 450mm | 600mm |
| PART NO. | STUD SIZE | MAX WALL HEIGHT (mm) | | | | | | | | |
| S51050 | 51mm x 0.50BMT | 2900 | 2530 | 2350 | 2910 | 2540 | 2360 | 2920 | 2550 | 2370 |
| S64050 | 64mm x 0.50BMT | 3400 | 2980 | 2730 | 3410 | 2990 | 2750 | 3470 | 3060 | 2760 |
| S64075 | 64mm x 0.75BMT | 3950 | 3450 | 3180 | 4020 | 3540 | 3250 | 4060 | 3560 | 3280 |
| S64115 | 64mm x 1.15BMT | 4450 | 3880 | 3550 | 4500 | 3950 | 3600 | 4550 | 3980 | 3620 |
| S76055 | 76mm x 0.55BMT | 4050 | 3530 | 3220 | 4140 | 3600 | 3250 | 4160 | 3620 | 3280 |
| S76075 | 76mm x 0.75BMT | 4500 | 3950 | 3600 | 4700 | 4100 | 3750 | 4730 | 4180 | 3800 |
| S76115 | 76mm x 1.15BMT | 5130 | 4480 | 4070 | 5150 | 4490 | 4080 | 5170 | 4500 | 4090 |
| S92055 | 92mm x 0.55BMT | 4640 | 4080 | 3650 | 4660 | 4090 | 3670 | 4680 | 4100 | 3690 |
| S92075 | 92mm x 0.75BMT | 5200 | 4540 | 4150 | 5290 | 4610 | 4190 | 5320 | 4630 | 4220 |
| S92115 | 92mm x 1.15BMT | 5930 | 5180 | 4700 | 5950 | 5200 | 4720 | 5970 | 5220 | 4730 |
| S15007 | 150mm x 0.75BMT | 7370 | 6600 | 5350 | 7390 | 6650 | 5390 | 7400 | 6680 | 5430 |
| S15012 | 150mm x 1.15BMT | 8300 | 7450 | 6850 | 8320 | 7480 | 6880 | 8350 | 7500 | 6900 |

* See page 37 for noggling requirements.

Notes:

1. Serviceability limits are as stated on tables.
2. Tables 57-60 are for internal non-load bearing walls.
3. Internal design pressures = 0.25 kPa serviceability and 0.375 kPa strength as per BCA 2009.
4. It is assumed the top plate is restrained laterally.
5. Shelf loading has not been allowed for in tabulated wall heights.
6. Noggings to be used in accordance with *Table 58* on page 38.
7. The above wall heights are suitable for up to two layers of the nominated lining thickness.

Span Tables - Internal Stud Wall Heights

Brittle Substrates - (ie. tiles, glass etc.)

Table 74

| MAXIMUM WALL HEIGHTS - LINING BOTH SIDES L/360 | | | | | | | | | | |
|---|-----------------|----------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|
| PLASTER THICKNESS (mm) | | 10mm PLASTERBOARD | | | 13mm PLASTERBOARD | | | 16mm PLASTERBOARD | | |
| STUD SPACING (mm) | | 300mm | 450mm | 600mm | 300mm | 450mm | 600mm | 300mm | 450mm | 600mm |
| PART NO. | STUD SIZE | MAX WALL HEIGHT (mm) | | | | | | | | |
| S51050 | 51mm x 0.50BMT | 3050 | 2750 | 2570 | 3340 | 3070 | 2910 | 3360 | 3150 | 3050 |
| S64050 | 64mm x 0.50BMT | 3520 | 3210 | 3110 | 3760 | 3520 | 3350 | 3950 | 3700 | 3600 |
| S64075 | 64mm x 0.75BMT | 4000 | 3660 | 3490 | 4200 | 3910 | 3730 | 4420 | 4100 | 3910 |
| S64115 | 64mm x 1.15BMT | 4330 | 3940 | 3680 | 4500 | 4150 | 3920 | 4680 | 4300 | 4060 |
| S76055 | 76mm x 0.55BMT | 4030 | 3680 | 3350 | 4280 | 3930 | 3750 | 4460 | 4150 | 3900 |
| S76075 | 76mm x 0.75BMT | 4620 | 4200 | 4000 | 4810 | 4540 | 4310 | 5160 | 4750 | 4550 |
| S76115 | 76mm x 1.15BMT | 5000 | 4520 | 4210 | 5260 | 4820 | 4580 | 5480 | 5040 | 4800 |
| S92055 | 92mm x 0.55BMT | 4710 | 4310 | 4050 | 4970 | 4600 | 4370 | 5190 | 4810 | 4610 |
| S92075 | 92mm x 0.75BMT | 5230 | 4750 | 4420 | 5530 | 5170 | 4870 | 5760 | 5350 | 5100 |
| S92115 | 92mm x 1.15BMT | 5700 | 5090 | 4670 | 6000 | 5440 | 5150 | 6190 | 5640 | 5350 |
| S15007 | 150mm x 0.75BMT | 7150 | 6370 | 5880 | 7350 | 6680 | 6270 | 7540 | 6850 | 6440 |
| S15012 | 150mm x 1.15BMT | 7950 | 7060 | 6480 | 8200 | 7320 | 6840 | 8310 | 7480 | 6970 |

Table 75

| MAXIMUM WALL HEIGHTS - LINING ONE SIDE L/360 | | | | | | | | | | |
|---|-----------------|----------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|
| PLASTER THICKNESS (mm) | | 10mm PLASTERBOARD | | | 13mm PLASTERBOARD | | | 16mm PLASTERBOARD | | |
| STUD SPACING (mm) | | 300mm | 450mm | 600mm | 300mm | 450mm | 600mm | 300mm | 450mm | 600mm |
| PART NO. | STUD SIZE | MAX WALL HEIGHT (mm) | | | | | | | | |
| S51050 | 51mm x 0.50BMT | 2520 | 2240 | 2020 | 2540 | 2260 | 2040 | 2560 | 2280 | 2060 |
| S64050 | 64mm x 0.50BMT | 2960 | 2590 | 2360 | 2980 | 2600 | 2370 | 3100 | 2690 | 2450 |
| S64075 | 64mm x 0.75BMT | 3450 | 3000 | 2750 | 3560 | 3120 | 2850 | 3580 | 3150 | 2880 |
| S64115 | 64mm x 1.15BMT | 3880 | 3400 | 3100 | 3970 | 3490 | 3170 | 3990 | 3510 | 3190 |
| S76055 | 76mm x 0.55BMT | 3520 | 3080 | 2800 | 3670 | 3220 | 2950 | 3700 | 3260 | 2960 |
| S76075 | 76mm x 0.75BMT | 3940 | 3430 | 3120 | 4100 | 3700 | 3400 | 4140 | 3770 | 3460 |
| S76115 | 76mm x 1.15BMT | 4460 | 3890 | 3550 | 4470 | 3900 | 3570 | 4480 | 3910 | 3590 |
| S92055 | 92mm x 0.55BMT | 4070 | 3560 | 3230 | 4160 | 3630 | 3260 | 4200 | 3650 | 3280 |
| S92075 | 92mm x 0.75BMT | 4530 | 3960 | 3610 | 4690 | 4120 | 3750 | 4700 | 4130 | 3780 |
| S92115 | 92mm x 1.15BMT | 5160 | 4520 | 4100 | 5250 | 4580 | 4150 | 5300 | 4600 | 4160 |
| S15007 | 150mm x 0.75BMT | 6680 | 5810 | 5270 | 6700 | 5830 | 5290 | 6730 | 5850 | 5300 |
| S15012 | 150mm x 1.15BMT | 7620 | 6660 | 6060 | 7640 | 6690 | 6090 | 7660 | 6730 | 6110 |

* See page 37 for noggling requirements.

Notes:

1. Serviceability limits are as stated on tables.
2. Tables 57-60 are for internal non-load bearing walls.
3. Internal design pressures = 0.25 kPa serviceability and 0.375 kPa strength as per BCA 2009.
4. It is assumed the top plate is restrained laterally.
5. Shelf loading has not been allowed for in tabulated wall heights.
6. Noggings to be used in accordance with *Table 58* on page 38.
7. The above wall heights are suitable for up to two layers of the nominated lining thickness.

Shelf Loadings - Stud Walls

Table 84

| MAXIMUM ALLOWABLE SHELF LOADS- WALL HEIGHT 2400mm | | | | | | | |
|--|-----------------------|--|----------|----------|----------|----------|----------|
| WALL HEIGHT - 2400mm | | NUMBER OF SHELVES SPACED EQUALLY OVER FULL HEIGHT | | | | | |
| STUD SIZE | SHELF WIDTH mm | 1 | 2 | 3 | 4 | 5 | 6 |
| | | MAXIMUM ALLOWABLE SHELF LOAD IN kg PER METRE RUN OF SHELF | | | | | |
| 64mm x 0.55BMT | 200 | 122 | 67 | 55 | 51 | 49 | 47 |
| | 300 | 81 | 45 | 37 | 34 | 33 | 32 |
| | 400 | 61 | 33 | 27 | 26 | 25 | 24 |
| 64mm x 0.75BMT | 200 | 183 | 100 | 82 | 77 | 74 | 71 |
| | 300 | 122 | 67 | 55 | 51 | 49 | 47 |
| | 400 | 92 | 50 | 41 | 39 | 37 | 36 |
| 76mm x 0.55BMT | 200 | 203 | 111 | 91 | 85 | 82 | 79 |
| | 300 | 135 | 74 | 61 | 57 | 55 | 53 |
| | 400 | 101 | 55 | 46 | 43 | 41 | 39 |
| 76mm x 0.75BMT | 200 | 277 | 151 | 124 | 116 | 112 | 108 |
| | 300 | 184 | 101 | 83 | 78 | 75 | 72 |
| | 400 | 138 | 76 | 62 | 58 | 56 | 54 |
| 76mm x 1.15BMT | 200 | 424 | 232 | 190 | 179 | 172 | 165 |
| | 300 | 283 | 155 | 127 | 119 | 115 | 110 |
| | 400 | 212 | 116 | 95 | 89 | 86 | 83 |

Table 85

| MAXIMUM ALLOWABLE SHELF LOADS- WALL HEIGHT 2700mm | | | | | | | |
|--|-----------------------|--|----------|----------|----------|----------|----------|
| WALL HEIGHT - 2700mm | | NUMBER OF SHELVES SPACED EQUALLY OVER FULL HEIGHT | | | | | |
| STUD SIZE | SHELF WIDTH mm | 1 | 2 | 3 | 4 | 5 | 6 |
| | | MAXIMUM ALLOWABLE SHELF LOAD IN kg PER METRE RUN OF SHELF | | | | | |
| 64mm x 0.55BMT | 200 | 109 | 59 | 49 | 46 | 44 | 42 |
| | 300 | 72 | 40 | 32 | 30 | 29 | 28 |
| | 400 | 54 | 30 | 24 | 23 | 22 | 21 |
| 64mm x 0.75BMT | 200 | 163 | 89 | 73 | 69 | 66 | 63 |
| | 300 | 109 | 59 | 49 | 46 | 44 | 42 |
| | 400 | 81 | 45 | 37 | 34 | 33 | 32 |
| 64mm x 1.15BMT | 200 | 250 | 137 | 112 | 105 | 101 | 97 |
| | 300 | 166 | 91 | 75 | 70 | 67 | 65 |
| | 400 | 92 | 50 | 41 | 39 | 37 | 36 |
| 76mm x 0.55BMT | 200 | 180 | 99 | 81 | 76 | 73 | 70 |
| | 300 | 120 | 66 | 54 | 51 | 49 | 47 |
| | 400 | 90 | 49 | 40 | 38 | 37 | 35 |
| 76mm x 0.75BMT | 200 | 246 | 134 | 110 | 104 | 100 | 96 |
| | 300 | 164 | 90 | 74 | 69 | 66 | 64 |
| | 400 | 138 | 76 | 62 | 58 | 56 | 54 |
| 76mm x 1.15BMT | 200 | 377 | 206 | 169 | 159 | 153 | 147 |
| | 300 | 251 | 137 | 113 | 106 | 102 | 98 |
| | 400 | 212 | 116 | 95 | 89 | 86 | 83 |

Shelf Loadings - Stud Walls

Table 86

| MAXIMUM ALLOWABLE SHELF LOADS- WALL HEIGHT 3000mm | | | | | | | |
|--|-----------------------|--|----------|----------|----------|----------|----------|
| WALL HEIGHT - 3000mm | | NUMBER OF SHELVES SPACED EQUALLY OVER FULL HEIGHT | | | | | |
| STUD SIZE | SHELF WIDTH mm | 1 | 2 | 3 | 4 | 5 | 6 |
| | | MAXIMUM ALLOWABLE SHELF LOAD IN kg PER METRE RUN OF SHELF | | | | | |
| 64mm x 0.55BMT | 200 | 98 | 53 | 44 | 41 | 40 | 38 |
| | 300 | 65 | 36 | 29 | 27 | 26 | 25 |
| | 400 | 49 | 27 | 22 | 21 | 20 | 19 |
| 64mm x 0.75BMT | 200 | 147 | 80 | 66 | 62 | 59 | 57 |
| | 300 | 98 | 53 | 44 | 41 | 40 | 38 |
| | 400 | 73 | 40 | 33 | 31 | 30 | 28 |
| 64mm x 1.15BMT | 200 | 225 | 123 | 101 | 95 | 91 | 87 |
| | 300 | 150 | 82 | 67 | 63 | 61 | 58 |
| | 400 | 112 | 61 | 50 | 47 | 45 | 44 |
| 76mm x 0.55BMT | 200 | 162 | 89 | 73 | 68 | 66 | 63 |
| | 300 | 108 | 59 | 49 | 46 | 44 | 42 |
| | 400 | 81 | 44 | 36 | 34 | 33 | 32 |
| 76mm x 0.75BMT | 200 | 221 | 121 | 99 | 93 | 90 | 86 |
| | 300 | 148 | 81 | 66 | 62 | 60 | 57 |
| | 400 | 111 | 61 | 50 | 47 | 45 | 43 |
| 76mm x 1.15BMT | 200 | 339 | 186 | 152 | 143 | 137 | 132 |
| | 300 | 226 | 124 | 102 | 95 | 92 | 88 |
| | 400 | 170 | 93 | 76 | 71 | 69 | 66 |

Table 87

| MAXIMUM ALLOWABLE SHELF LOADS- WALL HEIGHT 3600mm | | | | | | | |
|--|-----------------------|--|----------|----------|----------|----------|----------|
| WALL HEIGHT - 3600mm | | NUMBER OF SHELVES SPACED EQUALLY OVER FULL HEIGHT | | | | | |
| STUD SIZE | SHELF WIDTH mm | 1 | 2 | 3 | 4 | 5 | 6 |
| | | MAXIMUM ALLOWABLE SHELF LOAD IN kg PER METRE RUN OF SHELF | | | | | |
| 76mm x 0.55BMT | 200 | 135 | 74 | 61 | 57 | 55 | 53 |
| | 300 | 90 | 49 | 40 | 38 | 37 | 35 |
| | 400 | 68 | 37 | 30 | 28 | 27 | 26 |
| 76mm x 0.75BMT | 200 | 184 | 101 | 83 | 78 | 75 | 72 |
| | 300 | 123 | 67 | 55 | 52 | 50 | 48 |
| | 400 | 92 | 50 | 41 | 39 | 37 | 36 |
| 76mm x 1.15BMT | 200 | 283 | 155 | 127 | 119 | 115 | 110 |
| | 300 | 189 | 103 | 85 | 79 | 76 | 73 |
| | 400 | 141 | 77 | 63 | 60 | 57 | 55 |
| 92mm x 0.55BMT | 200 | 208 | 114 | 93 | 88 | 84 | 80 |
| | 300 | 139 | 76 | 62 | 58 | 56 | 54 |
| | 400 | 104 | 57 | 47 | 44 | 42 | 40 |
| 92mm x 0.75BMT | 200 | 284 | 155 | 127 | 120 | 115 | 110 |
| | 300 | 189 | 104 | 85 | 80 | 77 | 74 |
| | 400 | 142 | 78 | 64 | 60 | 57 | 55 |
| 92mm x 1.15BMT | 200 | 435 | 238 | 195 | 183 | 176 | 169 |
| | 300 | 290 | 159 | 130 | 122 | 118 | 113 |
| | 400 | 218 | 119 | 98 | 92 | 88 | 85 |

Shelf Loadings - Stud Walls

Table 88

| MAXIMUM ALLOWABLE SHELF LOADS- WALL HEIGHT 4200mm | | | | | | | |
|--|-----------------------|--|----------|----------|----------|----------|----------|
| WALL HEIGHT - 4200mm | | NUMBER OF SHELVES SPACED EQUALLY OVER FULL HEIGHT | | | | | |
| STUD SIZE | SHELF WIDTH mm | 1 | 2 | 3 | 4 | 5 | 6 |
| | | MAXIMUM ALLOWABLE SHELF LOAD IN kg PER METRE RUN OF SHELF | | | | | |
| 76mm x 0.55BMT | 200 | 116 | 63 | 52 | 49 | 47 | 45 |
| | 300 | 77 | 42 | 35 | 33 | 31 | 30 |
| | 400 | 58 | 32 | 26 | 24 | 23 | 23 |
| 76mm x 0.75BMT | 200 | 158 | 86 | 71 | 67 | 64 | 61 |
| | 300 | 105 | 58 | 47 | 44 | 43 | 41 |
| | 400 | 79 | 43 | 35 | 33 | 32 | 31 |
| 76mm x 1.15BMT | 200 | 242 | 133 | 109 | 102 | 98 | 94 |
| | 300 | 162 | 88 | 73 | 68 | 65 | 63 |
| | 400 | 121 | 66 | 54 | 51 | 49 | 47 |
| 92mm x 0.55BMT | 200 | 178 | 98 | 80 | 75 | 72 | 69 |
| | 300 | 119 | 65 | 53 | 50 | 48 | 46 |
| | 400 | 89 | 49 | 40 | 38 | 36 | 35 |
| 92mm x 0.75BMT | 200 | 243 | 133 | 109 | 102 | 99 | 95 |
| | 300 | 162 | 89 | 73 | 68 | 66 | 63 |
| | 400 | 122 | 67 | 55 | 51 | 49 | 47 |
| 92mm x 1.15BMT | 200 | 373 | 204 | 168 | 157 | 151 | 145 |
| | 300 | 249 | 136 | 112 | 105 | 101 | 97 |
| | 400 | 187 | 102 | 84 | 79 | 76 | 73 |

Table 89

| MAXIMUM ALLOWABLE SHELF LOADS- WALL HEIGHT 4800mm | | | | | | | |
|--|-----------------------|--|----------|----------|----------|----------|----------|
| WALL HEIGHT - 4800mm | | NUMBER OF SHELVES SPACED EQUALLY OVER FULL HEIGHT | | | | | |
| STUD SIZE | SHELF WIDTH mm | 1 | 2 | 3 | 4 | 5 | 6 |
| | | MAXIMUM ALLOWABLE SHELF LOAD IN kg PER METRE RUN OF SHELF | | | | | |
| 76mm x 0.55BMT | 200 | 101 | 55 | 46 | 43 | 41 | 39 |
| | 300 | 68 | 37 | 30 | 28 | 27 | 26 |
| | 400 | 51 | 28 | 23 | 21 | 21 | 20 |
| 76mm x 0.75BMT | 200 | 138 | 76 | 62 | 58 | 56 | 54 |
| | 300 | 92 | 50 | 41 | 39 | 37 | 36 |
| | 400 | 69 | 38 | 31 | 29 | 28 | 27 |
| 76mm x 1.15BMT | 200 | 212 | 116 | 95 | 89 | 86 | 83 |
| | 300 | 141 | 77 | 63 | 60 | 57 | 55 |
| | 400 | 106 | 58 | 48 | 45 | 43 | 41 |
| 92mm x 0.55BMT | 200 | 156 | 85 | 70 | 66 | 63 | 61 |
| | 300 | 104 | 57 | 47 | 44 | 42 | 40 |
| | 400 | 78 | 43 | 35 | 33 | 32 | 30 |
| 92mm x 0.75BMT | 200 | 213 | 116 | 96 | 90 | 86 | 83 |
| | 300 | 142 | 78 | 64 | 60 | 57 | 55 |
| | 400 | 106 | 58 | 48 | 45 | 43 | 41 |
| 92mm x 1.15BMT | 200 | 326 | 179 | 147 | 137 | 132 | 127 |
| | 300 | 218 | 119 | 98 | 92 | 88 | 85 |
| | 400 | 163 | 89 | 73 | 69 | 66 | 63 |

Shelf Loadings - Stud Walls

Table 90

| MAXIMUM ALLOWABLE SHELF LOADS- WALL HEIGHT 6000mm | | | | | | | |
|---|----------------|---|-----|-----|-----|-----|-----|
| WALL HEIGHT - 6000mm | | NUMBER OF SHELVES SPACED EQUALLY OVER FULL HEIGHT | | | | | |
| STUD SIZE | SHELF WIDTH mm | 1 | 2 | 3 | 4 | 5 | 6 |
| | | MAXIMUM ALLOWABLE SHELF LOAD IN kg PER METRE RUN OF SHELF | | | | | |
| 92mm x 1.15BMT | 200 | 261 | 143 | 117 | 110 | 106 | 102 |
| | 300 | 174 | 95 | 78 | 73 | 71 | 68 |
| | 400 | 131 | 71 | 59 | 55 | 53 | 51 |
| 150mm x 0.75BMT | 200 | 450 | 250 | 167 | 125 | 100 | 83 |
| | 300 | 298 | 196 | 161 | 120 | 95 | 83 |
| | 400 | 232 | 147 | 121 | 113 | 90 | 80 |
| 150mm x 1.15BMT | 200 | 650 | 400 | 370 | 346 | 320 | 267 |
| | 300 | 475 | 300 | 246 | 231 | 222 | 213 |
| | 400 | 368 | 225 | 185 | 173 | 167 | 160 |

Design Parameters and Assumptions

Preparation of the Shelf load Tables have been based on the following assumptions.

1. Max Stud Spacing - 600mm.
2. Top and bottom wall tracks are mechanically fixed to floor and ceiling framing.
3. Studs are mechanically fixed to top and bottom wall tracks.
4. Studs and track sections are manufactured by Studco Building Systems.
5. Shelves are evenly distributed over 2/3 the wall height.
6. The tables are applicable to shelves on one side of the wall.
7. Studco takes no responsibility for the shelf design or the attachment methods unless specifically requested to carry out checks on particular systems.
8. The tables have been designed for a deflection limit of wall height/480.
9. Wall studs are clad both sides with 13mm plasterboard or thicker.
10. Noggings are provided in accordance with minimum requirements as specified for wall construction.
11. Studs are to be continuous, not spliced.

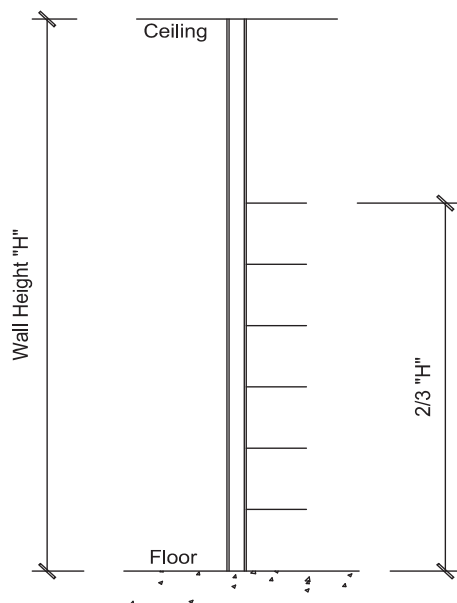


Fig. 1 Shelf Distribution Detail

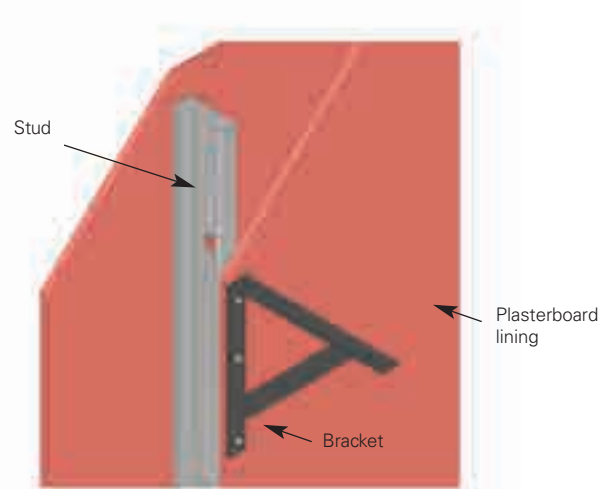


Fig. 2 Bracket Fixing to Stud Wall.

Consult Studco Engineer for project specifications.

Top Hat & Cladding Sections



Heavy Gauge Top Hats

Available in a range of sizes for fixing cladding to interior and exterior building structures.

Top Hat & Cladding Sections

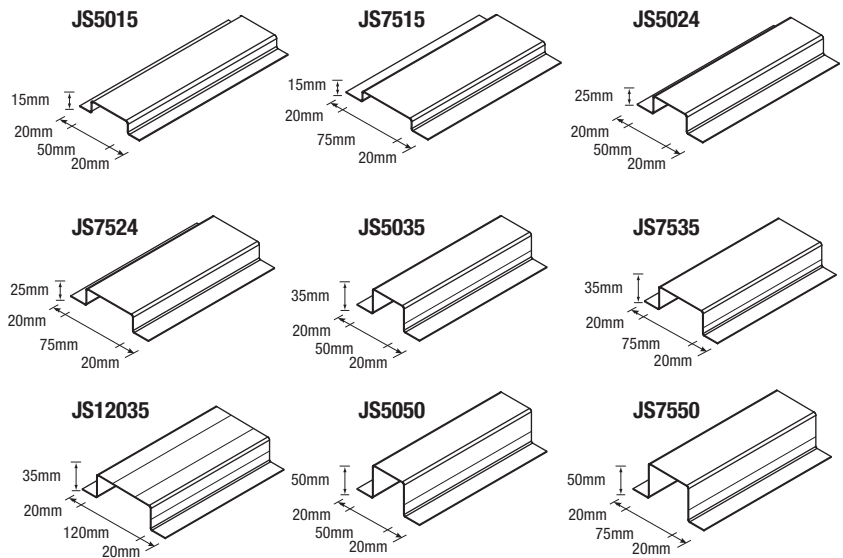
Top Hats are used for fixing support for lining material where the structural framework is not suitable for fixing directly to. A range of Junction Studs, Battens and Top Hats in various sizes and thicknesses are available to suit any cladding requirements for interior or exterior use. Refer to page 69-71 for Top Hat span tables. Top Hat sections can be custom rolled to suit your project specific requirements.

Components

Top Hats

Table 91

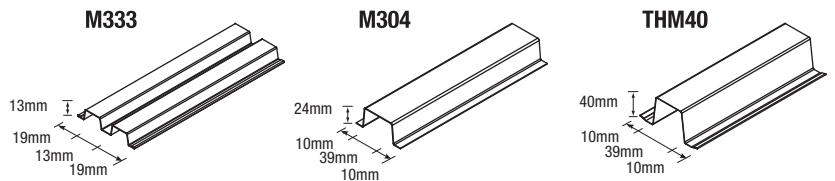
| PART No | DESCRIPTION |
|---------|----------------------------|
| JS5015 | Top Hat 50 x 15 x 1.15BMT |
| JS7515 | Top Hat 75 x 15 x 1.15BMT |
| JS5024 | Top Hat 50 x 25 x 1.15BMT |
| JS7524 | Top Hat 75 x 25 x 1.15BMT |
| JS5035 | Top Hat 50 x 35 x 1.15BMT |
| JS7535 | Top Hat 75 x 35 x 1.15BMT |
| JS12035 | Top Hat 120 x 35 x 1.15BMT |
| JS5050 | Top Hat 50 x 50 x 1.15BMT |
| JS7550 | Top Hat 75 x 50 x 1.15BMT |



Battens

Table 92

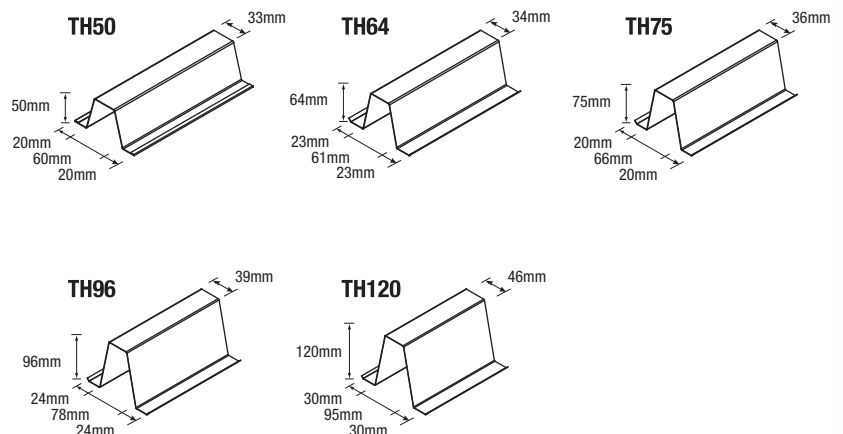
| PART No | DESCRIPTION |
|---------|----------------------------------|
| M333S | Recessed Batten 13mm Smooth Face |
| M304 | Batten 24mm x 0.75BMT |
| THM40 | Batten 40mm x 40mm x 0.48BMT |



Top Hat - Angled legs

Table 93

| PART No | DESCRIPTION |
|---------|-------------------------|
| TH5075 | Top Hat 50mm x 0.75BMT |
| TH6475 | Top Hat 64mm x 0.75BMT |
| TH6495 | Top Hat 64mm x 0.95BMT |
| TH7575 | Top Hat 75mm x 0.75BMT |
| TH7595 | Top Hat 75mm x 0.95BMT |
| TH9675 | Top Hat 96mm x 0.75BMT |
| TH9695 | Top Hat 96mm x 0.95BMT |
| TH12075 | Top Hat 120mm x 0.75BMT |
| TH12095 | Top Hat 120mm x 0.95BMT |



Top Hat & Cladding Sections

Installation Guide - Top Hats and Junction Studs

Top Hat & Cladding Sections

Fig. 1 Typical Top Hat Installation

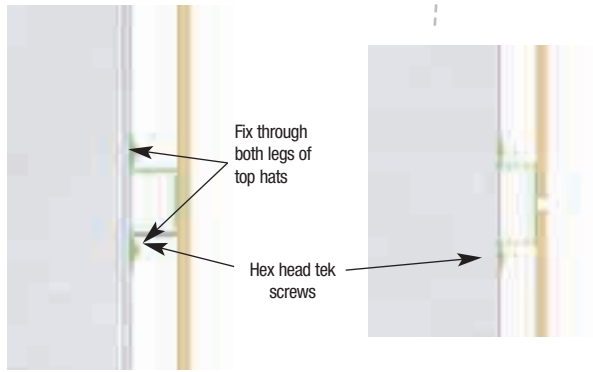
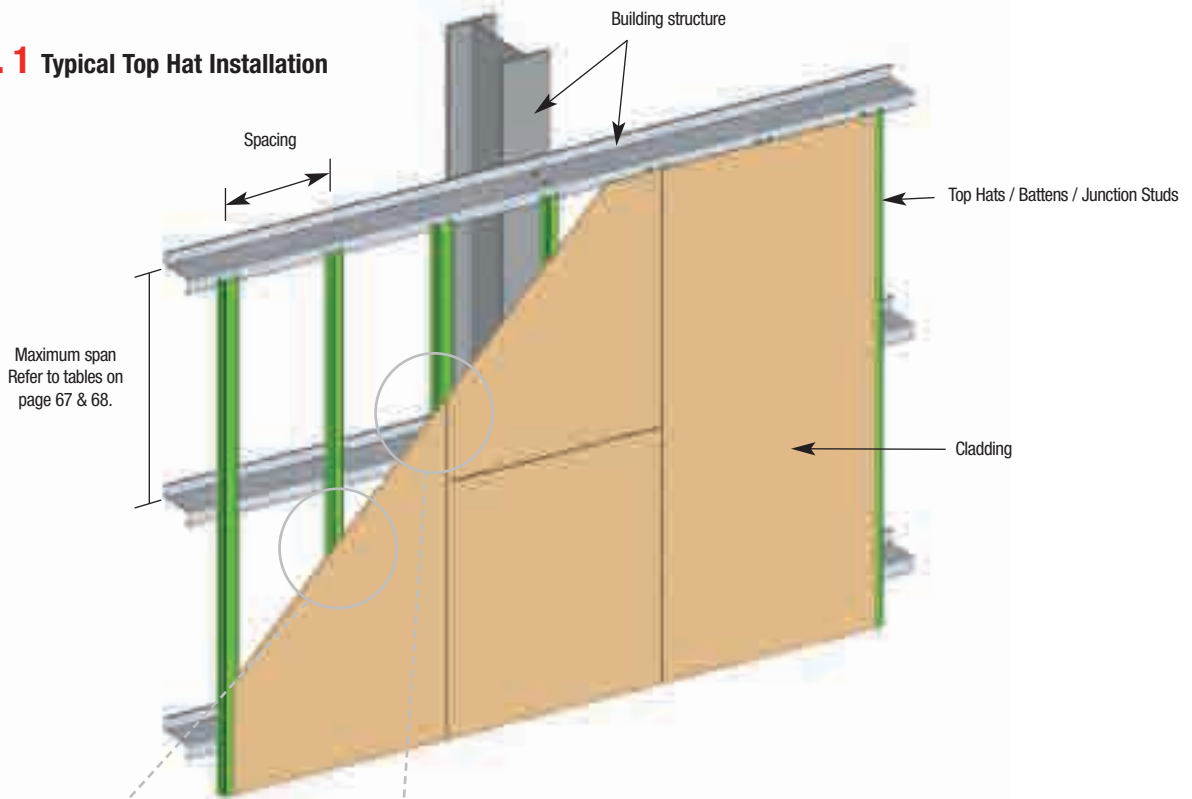


Fig. 2 Top Hat Sections to Support CFC Sheeting

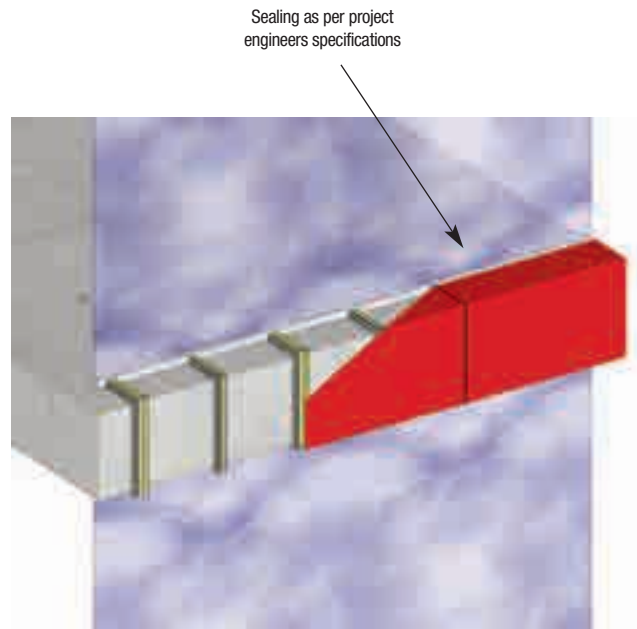


Fig. 4 Junction stud fixed to primary structure to support composite panel

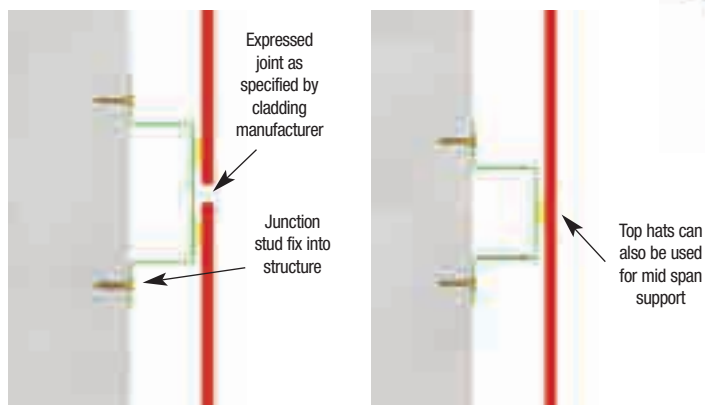


Fig. 3 Top Hat Sections to Support Aluminium Composite Panel

Span Tables - Top Hats

Design Notes:

1. Cladding deflection limit = Span / 360
2. Seismic was not specified or considered in this design.
3. Framing design complies with AS/NZ1170 (Part 0, 1, 2)
4. Cladding weight = 30 kg/m² Max
5. G2 Steel, F_y = 300MPa and F_u = 350MPa

Table 94

| JS5050115 (SPAN/360) | | | | | | | |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|------|
| Design Wind Pressure kPa | | Single Span | | Double Span | | Three Spans | |
| | | Top Hat Spacing mm | | Top Hat Spacing mm | | Top Hat Spacing mm | |
| | | 450 | 600 | 450 | 600 | 450 | 600 |
| SER | ULT | MAXIMUM SPAN OF TOP HAT PROFILE (mm) | | | | | |
| 0.53 | 0.75 | 2450 | 2200 | 3200 | 2950 | 3000 | 2750 |
| 0.7 | 1.0 | 2200 | 2000 | 2900 | 2700 | 2700 | 2500 |
| 1.05 | 1.5 | 1900 | 1750 | 2600 | 2350 | 2400 | 2100 |
| 1.4 | 2.0 | 1750 | 1600 | 2300 | 2050 | 2150 | 1950 |
| 1.75 | 2.5 | 1600 | 1450 | 2100 | 1900 | 2000 | 1800 |
| 2.1 | 3.0 | 1500 | 1400 | 1950 | 1750 | 1900 | 1700 |
| 2.8 | 4.0 | 1400 | 1250 | 1750 | 1550 | 1700 | 1550 |

Table 95

| JS12035115 (SPAN/360) | | | | | | | |
|------------------------------|------|--------------------------------------|------|--------------------|------|--------------------|------|
| Design Wind Pressure kPa | | Single Span | | Double Span | | Three Spans | |
| | | Top Hat Spacing mm | | Top Hat Spacing mm | | Top Hat Spacing mm | |
| | | 450 | 600 | 450 | 600 | 450 | 600 |
| SER | ULT | MAXIMUM SPAN OF TOP HAT PROFILE (mm) | | | | | |
| 0.53 | 0.75 | 2050 | 1800 | 2700 | 2500 | 2500 | 2300 |
| 0.7 | 1.0 | 1850 | 1700 | 2500 | 2250 | 2300 | 2100 |
| 1.05 | 1.5 | 1600 | 1450 | 2200 | 2000 | 2000 | 1800 |
| 1.4 | 2.0 | 1450 | 1350 | 2000 | 1800 | 1800 | 1650 |
| 1.75 | 2.5 | 1350 | 1250 | 1850 | 1650 | 1700 | 1550 |
| 2.1 | 3.0 | 1300 | 1150 | 1700 | 1550 | 1600 | 1450 |
| 2.8 | 4.0 | 1150 | 1050 | 1550 | 1400 | 1450 | 1300 |

Table 96

| JS5015115 (SPAN/360) | | | | | | | |
|-----------------------------|------|--------------------------------------|-----|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa | | Single Span | | Double Span | | Three Spans | |
| | | Top Hat Spacing mm | | Top Hat Spacing mm | | Top Hat Spacing mm | |
| | | 450 | 600 | 450 | 600 | 450 | 600 |
| SER | ULT | MAXIMUM SPAN OF TOP HAT PROFILE (mm) | | | | | |
| 0.53 | 0.75 | 950 | 850 | 1300 | 1150 | NA | |
| 0.7 | 1.0 | 850 | 800 | 1150 | 1050 | | |
| 1.05 | 1.5 | 750 | 700 | 1000 | 900 | | |
| 1.4 | 2.0 | 700 | 630 | 900 | 850 | | |
| 1.75 | 2.5 | 650 | 600 | 850 | 800 | | |
| 2.1 | 3.0 | 600 | 550 | 800 | 750 | | |
| 2.8 | 4.0 | 550 | 500 | 750 | 650 | | |

Table 97

| JS5025115 (SPAN/360) | | | | | | | |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa | | Single Span | | Double Span | | Three Spans | |
| | | Top Hat Spacing mm | | Top Hat Spacing mm | | Top Hat Spacing mm | |
| | | 450 | 600 | 450 | 600 | 450 | 600 |
| SER | ULT | MAXIMUM SPAN OF TOP HAT PROFILE (mm) | | | | | |
| 0.53 | 0.75 | 1400 | 1250 | 1900 | 1750 | NA | |
| 0.7 | 1.0 | 1250 | 1150 | 1750 | 1600 | | |
| 1.05 | 1.5 | 1100 | 1000 | 1500 | 1400 | | |
| 1.4 | 2.0 | 1000 | 900 | 1400 | 1250 | | |
| 1.75 | 2.5 | 950 | 850 | 1300 | 1150 | | |
| 2.1 | 3.0 | 900 | 800 | 1200 | 1100 | | |
| 2.8 | 4.0 | 800 | 700 | 1100 | 1000 | | |

Table 98

| JS5035115 (SPAN/360) | | | | | | | |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa | | Single Span | | Double Span | | Three Spans | |
| | | Top Hat Spacing mm | | Top Hat Spacing mm | | Top Hat Spacing mm | |
| | | 450 | 600 | 450 | 600 | 450 | 600 |
| SER | ULT | MAXIMUM SPAN OF TOP HAT PROFILE (mm) | | | | | |
| 0.53 | 0.75 | 1850 | 1650 | 2300 | 2100 | NA | |
| 0.7 | 1.0 | 1650 | 1500 | 2150 | 1950 | | |
| 1.05 | 1.5 | 1450 | 1300 | 1900 | 1750 | | |
| 1.4 | 2.0 | 1300 | 1200 | 1750 | 1600 | | |
| 1.75 | 2.5 | 1200 | 1100 | 1600 | 1450 | | |
| 2.1 | 3.0 | 1100 | 1000 | 1500 | 1400 | | |
| 2.8 | 4.0 | 1050 | 950 | 1400 | 1200 | | |

Notes:

1. Ultimate limit state load capacity to be calculated in accordance with AS/NZS 1170.0 as applicable
2. Connections to be independently checked

Span Tables - Junction Studs

Design Notes:

1. Cladding deflection limit = Span / 240
2. Seismic was not specified or considered in this design.
3. Framing design complies with AS/NZ1170 (Part 0, 1, 2)
4. Cladding weight = 30 kg/m² Max
5. G2 Steel, Fy = 300MPa and Fu = 350MPa

Table 99

| JS5050115 (SPAN/240) | | | | | | | |
|-----------------------------|------|--------------------------------------|-------|--------------------|-------|--------------------|-------|
| Design Wind Pressure kPa | | Single Span | | Double Span | | Three Spans | |
| | | Top Hat Spacing mm | | Top Hat Spacing mm | | Top Hat Spacing mm | |
| | | 450 | 600 | 450 | 600 | 450 | 600 |
| SER | ULT | MAXIMUM SPAN OF TOP HAT PROFILE (mm) | | | | | |
| 0.53 | 0.75 | 280.0 | 2550 | 3750 | 3300 | 3450 | 3150 |
| 0.7 | 1.0 | 255.0 | 2300 | 3300 | 2850 | 3150 | 2850 |
| 1.05 | 1.5 | 2200 | 200.0 | 2700 | 235.0 | 2750 | 245.0 |
| 1.4 | 2.0 | 2000 | 1800 | 2300 | 2050 | 2500 | 2250 |
| 1.75 | 2.5 | 1850 | 1700 | 2100 | 1900 | 2300 | 2050 |
| 2.1 | 3.0 | 1750 | 1500 | 1950 | 1750 | 2150 | 1900 |
| 2.8 | 4.0 | 1600 | 1450 | 1750 | 1550 | 1900 | 1650 |

Table 100

| JS12035115 (SPAN/240) | | | | | | | |
|------------------------------|------|--------------------------------------|------|--------------------|------|--------------------|------|
| Design Wind Pressure kPa | | Single Span | | Double Span | | Three Spans | |
| | | Top Hat Spacing mm | | Top Hat Spacing mm | | Top Hat Spacing mm | |
| | | 450 | 600 | 450 | 600 | 450 | 600 |
| SER | ULT | MAXIMUM SPAN OF TOP HAT PROFILE (mm) | | | | | |
| 0.53 | 0.75 | 2350 | 2100 | 3150 | 2850 | 2900 | 2650 |
| 0.7 | 1.0 | 2150 | 1950 | 2850 | 2550 | 2650 | 2400 |
| 1.05 | 1.5 | 1850 | 1700 | 2500 | 2250 | 2300 | 2100 |
| 1.4 | 2.0 | 1700 | 1550 | 2250 | 1950 | 2100 | 1900 |
| 1.75 | 2.5 | 1550 | 1400 | 2000 | 1650 | 1950 | 1750 |
| 2.1 | 3.0 | 1450 | 1350 | 1800 | 1550 | 1800 | 1650 |
| 2.8 | 4.0 | 1350 | 1100 | 1550 | 1350 | 1650 | 1500 |

Table 101

| JS5015115 (SPAN/240) | | | | | | | |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa | | Single Span | | Double Span | | Three Spans | |
| | | Top Hat Spacing mm | | Top Hat Spacing mm | | Top Hat Spacing mm | |
| | | 450 | 600 | 450 | 600 | 450 | 600 |
| SER | ULT | MAXIMUM SPAN OF TOP HAT PROFILE (mm) | | | | | |
| 0.53 | 0.75 | 1100 | 1000 | 1500 | 1350 | NA | |
| 0.7 | 1.0 | 1000 | 900 | 1350 | 1200 | | |
| 1.05 | 1.5 | 850 | 800 | 1200 | 1050 | | |
| 1.4 | 2.0 | 800 | 700 | 1050 | 950 | | |
| 1.75 | 2.5 | 750 | 680 | 1000 | 900 | | |
| 2.1 | 3.0 | 700 | 640 | 950 | 800 | | |
| 2.8 | 4.0 | 640 | 580 | 800 | 700 | | |

Table 102

| JS5025115 (SPAN/240) | | | | | | | |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa | | Single Span | | Double Span | | Three Spans | |
| | | Top Hat Spacing mm | | Top Hat Spacing mm | | Top Hat Spacing mm | |
| | | 450 | 600 | 450 | 600 | 450 | 600 |
| SER | ULT | MAXIMUM SPAN OF TOP HAT PROFILE (mm) | | | | | |
| 0.53 | 0.75 | 1650 | 1500 | 2200 | 2000 | NA | |
| 0.7 | 1.0 | 1500 | 1350 | 2000 | 1800 | | |
| 1.05 | 1.5 | 1300 | 1150 | 1750 | 1600 | | |
| 1.4 | 2.0 | 1150 | 1050 | 1600 | 1450 | | |
| 1.75 | 2.5 | 1110 | 1000 | 1450 | 1350 | | |
| 2.1 | 3.0 | 1000 | 950 | 1400 | 1250 | | |
| 2.8 | 4.0 | 950 | 850 | 1250 | 1100 | | |

Table 103

| JS5035115 (SPAN/240) | | | | | | | |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa | | Single Span | | Double Span | | Three Spans | |
| | | Top Hat Spacing mm | | Top Hat Spacing mm | | Top Hat Spacing mm | |
| | | 450 | 600 | 450 | 600 | 450 | 600 |
| SER | ULT | MAXIMUM SPAN OF TOP HAT PROFILE (mm) | | | | | |
| 0.53 | 0.75 | 2100 | 1900 | 2850 | 2550 | NA | |
| 0.7 | 1.0 | 1900 | 1750 | 2600 | 2350 | | |
| 1.05 | 1.5 | 1650 | 1500 | 2250 | 2050 | | |
| 1.4 | 2.0 | 1500 | 1400 | 2050 | 1850 | | |
| 1.75 | 2.5 | 1400 | 1300 | 1900 | 1700 | | |
| 2.1 | 3.0 | 1300 | 1200 | 1800 | 1600 | | |
| 2.8 | 4.0 | 1200 | 1050 | 1600 | 1450 | | |

Span Tables - Top Hats

Table 104

| TOP HAT SECTION TH50 X 0.75BMT | | | | | | | | | | | | | |
|---------------------------------------|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | PURLIN SPACING | | | | | | | | | | | |
| Loading | Wind Class | 600 | | | 900 | | | 1200 | | | 1500 | | |
| | | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| MAXIMUM ALLOWABLE SPAN (mm) | | | | | | | | | | | | | |
| INWARD LOADS | | 1600 | 2439 | 2661 | 1578 | 2389 | 2603 | 1556 | 2344 | 2551 | 1537 | 2303 | 2477 |
| OUTWARD LOADS | TC3 | 2777 | 3715 | 3959 | 2426 | 3246 | 3458 | 2204 | 2949 | 3142 | 2046 | 2737 | 2917 |
| | TC2.5 | 2691 | 3600 | 3837 | 2351 | 3145 | 3352 | 2136 | 2858 | 3045 | 1983 | 2653 | 2827 |
| | TC2.0 | 2611 | 3494 | 3723 | 2281 | 3052 | 3253 | 2073 | 2773 | 2955 | 1924 | 2575 | 2743 |

Table 105

| TOP HAT SECTION TH64 X 0.75BMT | | | | | | | | | | | | | |
|---------------------------------------|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | PURLIN SPACING | | | | | | | | | | | |
| Loading | Wind Class | 600 | | | 900 | | | 1200 | | | 1500 | | |
| | | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| MAXIMUM ALLOWABLE SPAN (mm) | | | | | | | | | | | | | |
| INWARD LOADS | | 2128 | 3229 | 3519 | 2090 | 3147 | 3424 | 2054 | 3074 | 3335 | 2022 | 3008 | 3202 |
| OUTWARD LOADS | TC3 | 3380 | 4522 | 4819 | 2953 | 3951 | 4210 | 2683 | 3589 | 3825 | 2490 | 3332 | 3551 |
| | TC2.5 | 3275 | 4383 | 4670 | 2861 | 3829 | 4080 | 2600 | 3479 | 3707 | 2413 | 3229 | 3441 |
| | TC2.0 | 3179 | 4253 | 4532 | 2777 | 3716 | 3959 | 2523 | 3376 | 3597 | 2342 | 3134 | 3340 |

Table 106

| TOP HAT SECTION TH64 X 0.95BMT | | | | | | | | | | | | | |
|---------------------------------------|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | PURLIN SPACING | | | | | | | | | | | |
| Loading | Wind Class | 600 | | | 900 | | | 1200 | | | 1500 | | |
| | | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| MAXIMUM ALLOWABLE SPAN (mm) | | | | | | | | | | | | | |
| INWARD LOADS | | 2384 | 3610 | 3932 | 2337 | 3510 | 3816 | 2293 | 3422 | 3714 | 2254 | 3343 | 3624 |
| OUTWARD LOADS | TC3 | 3657 | 4893 | 5214 | 3195 | 4275 | 4555 | 2903 | 3884 | 4138 | 2694 | 3605 | 3842 |
| | TC2.5 | 3544 | 4742 | 5053 | 3096 | 4143 | 4414 | 2813 | 3764 | 4011 | 2611 | 3494 | 3723 |
| | TC2.0 | 3439 | 4602 | 4904 | 3005 | 4020 | 4284 | 2730 | 3653 | 3892 | 2534 | 3391 | 3613 |

Notes:

- Definition of Wind Class as per AS 1170.2
- The maximum spans stated in all cases are based on either strength or serviceability requirements for the following load cases

| | |
|---------------------------|-----------------------|
| Serviceability Load Cases | Strength |
| 1. Dead Load Only | G |
| 2. Live Load Only | 0.7Q |
| 4. Wind Load | W _s |
| | Dead Load + Live Load |
| | Dead Load + Wind Load |
- Deflection Limits - Span/150

Top Hat & Gladding Sections

Span Tables - Top Hats

Table 106

| TOP HAT SECTION TH75 X 0.75BMT | | | | | | | | | | | | | |
|---------------------------------------|-------------------|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | PURLIN SPACING | | | | | | | | | | | |
| Loading | Wind Class | 600 | | | 900 | | | 1200 | | | 1500 | | |
| | | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| | | MAXIMUM ALLOWABLE SPAN (mm) | | | | | | | | | | | |
| INWARD LOADS | | 2649 | 4003 | 4358 | 2591 | 3883 | 4217 | 2539 | 3778 | 4005 | 2492 | 3686 | 3824 |
| OUTWARD LOADS | TC3 | 3936 | 5266 | 5611 | 3438 | 4600 | 4902 | 3124 | 4180 | 4454 | 2900 | 3880 | 4135 |
| | TC2.5 | 3814 | 5103 | 5438 | 3332 | 4458 | 4751 | 3027 | 4051 | 4316 | 2810 | 3760 | 4007 |
| | TC2.0 | 3701 | 4953 | 5277 | 3233 | 4327 | 4610 | 2938 | 3931 | 4189 | 2727 | 3649 | 3889 |

Table 107

| TOP HAT SECTION TH75 X 0.95BMT | | | | | | | | | | | | | |
|---------------------------------------|-------------------|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | PURLIN SPACING | | | | | | | | | | | |
| Loading | Wind Class | 600 | | | 900 | | | 1200 | | | 1500 | | |
| | | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| | | MAXIMUM ALLOWABLE SPAN (mm) | | | | | | | | | | | |
| INWARD LOADS | | 2964 | 4469 | 4864 | 2894 | 4324 | 4695 | 2831 | 4198 | 4551 | 2774 | 4088 | 4426 |
| OUTWARD LOADS | TC3 | 4258 | 5698 | 6071 | 3720 | 4977 | 5304 | 3380 | 4522 | 4819 | 3138 | 4198 | 4474 |
| | TC2.5 | 4127 | 5522 | 5884 | 3605 | 4824 | 5140 | 3275 | 4383 | 4670 | 3041 | 4068 | 4335 |
| | TC2.0 | 4005 | 5359 | 5710 | 3499 | 4681 | 4988 | 3179 | 4253 | 4532 | 2951 | 3948 | 4207 |

Table 108

| TOP HAT SECTION TH96 X 0.75BMT | | | | | | | | | | | | | |
|---------------------------------------|-------------------|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | PURLIN SPACING | | | | | | | | | | | |
| Loading | Wind Class | 600 | | | 900 | | | 1200 | | | 1500 | | |
| | | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| | | MAXIMUM ALLOWABLE SPAN (mm) | | | | | | | | | | | |
| INWARD LOADS | | 3521 | 5289 | 5750 | 3426 | 5095 | 5527 | 3341 | 4930 | 5233 | 3266 | 4787 | 4960 |
| OUTWARD LOADS | TC3 | 4808 | 6433 | 6855 | 4200 | 5620 | 5988 | 3816 | 5106 | 5441 | 3542 | 4740 | 5051 |
| | TC2.5 | 4659 | 6234 | 6643 | 4070 | 5446 | 5803 | 3698 | 4948 | 5273 | 3433 | 4594 | 4895 |
| | TC2.0 | 4522 | 6050 | 6447 | 3950 | 5285 | 5632 | 3589 | 4802 | 5117 | 3332 | 4421 | 4750 |

Notes:

- Definition of Wind Class as per AS 1170.2
- The maximum spans stated in all cases are based on either strength or serviceability requirements for the following load cases

| | | |
|---------------------------|----------|-----------------------|
| Serviceability Load Cases | Strength | |
| 1. Dead Load Only | G | Dead Load + Live Load |
| 2. Live Load Only | 0.7Q | Dead Load + Wind Load |
| 4. Wind Load | Ws | 1.2 G + 1.5Q |
| | | 0.9 G + Wu |
- Deflection Limits - Span/150

Span Tables - Top Hats

Table 109

| TOP HAT SECTION TH96 X 0.95BMT | | | | | | | | | | | | | |
|---------------------------------------|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | PURLIN SPACING | | | | | | | | | | | |
| Loading | Wind Class | 600 | | | 900 | | | 1200 | | | 1500 | | |
| | | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| MAXIMUM ALLOWABLE SPAN (mm) | | | | | | | | | | | | | |
| INWARD LOADS | | 3935 | 5894 | 6404 | 3818 | 5661 | 6136 | 3716 | 5465 | 5914 | 3626 | 5297 | 5724 |
| OUTWARD LOADS | TC3 | 5202 | 6960 | 7417 | 4544 | 6080 | 6479 | 4129 | 5525 | 5887 | 3833 | 5129 | 5465 |
| | TC2.5 | 5041 | 6745 | 7188 | 4404 | 5893 | 6279 | 4001 | 5354 | 5705 | 3714 | 4970 | 5296 |
| | TC2.0 | 4892 | 6546 | 6976 | 4274 | 5719 | 6094 | 3883 | 5196 | 5537 | 3605 | 4823 | 5140 |

Table 110

| TOP HAT SECTION TH120 X 0.75BMT | | | | | | | | | | | | | |
|--|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | PURLIN SPACING | | | | | | | | | | | |
| Loading | Wind Class | 600 | | | 900 | | | 1200 | | | 1500 | | |
| | | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| MAXIMUM ALLOWABLE SPAN (mm) | | | | | | | | | | | | | |
| INWARD LOADS | | 4997 | 7438 | 8070 | 4821 | 7096 | 7679 | 4670 | 6816 | 7363 | 4539 | 6580 | 7098 |
| OUTWARD LOADS | TC3 | 6174 | 8261 | 8803 | 5394 | 7217 | 7690 | 4900 | 6557 | 6987 | 4549 | 6087 | 6486 |
| | TC2.5 | 5983 | 8006 | 8531 | 5227 | 6994 | 7453 | 4749 | 6354 | 6771 | 4409 | 5899 | 6286 |
| | TC2.0 | 5807 | 7770 | 8279 | 5073 | 6787 | 7233 | 4609 | 6167 | 6571 | 4279 | 5725 | 6100 |

Table 111

| TOP HAT SECTION TH120 X 0.95BMT | | | | | | | | | | | | | |
|--|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | PURLIN SPACING | | | | | | | | | | | |
| Loading | Wind Class | 600 | | | 900 | | | 1200 | | | 1500 | | |
| | | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| MAXIMUM ALLOWABLE SPAN (mm) | | | | | | | | | | | | | |
| INWARD LOADS | | 5571 | 8266 | 8962 | 5359 | 7860 | 8500 | 5180 | 7532 | 8131 | 5026 | 7258 | 7824 |
| OUTWARD LOADS | TC3 | 6680 | 8938 | 9525 | 5836 | 7808 | 8321 | 5302 | 7095 | 7560 | 4922 | 6586 | 7018 |
| | TC2.5 | 6474 | 8662 | 9230 | 5655 | 7567 | 8064 | 5138 | 6875 | 7326 | 4770 | 6383 | 6801 |
| | TC2.0 | 6283 | 8407 | 8958 | 5488 | 7344 | 7826 | 4987 | 6672 | 7110 | 4629 | 6194 | 6600 |

Notes:

- Definition of Wind Class as per AS 1170.2
- The maximum spans stated in all cases are based on either strength or serviceability requirements for the following load cases

| | | |
|---------------------------|----------|---|
| Serviceability Load Cases | Strength | |
| 1. Dead Load Only | G | Dead Load + Live Load 1.2 G + 1.5Q |
| 2. Live Load Only | 0.7Q | Dead Load + Wind Load 0.9 G + Wu |
| 4. Wind Load | Ws | |
- Deflection Limits - Span/150

EZY Finishing Sections



EzyPelmet

The Strong And Versatile
Alternative For Stop Ends



EzyReveal

Quick And Economical
Finishing Of Reveals



EzyCap

Flush Finish Cavity Slider Kit



FastCap

Custom Finishing Sections

EZY Finishing Sections

Ezy finishing sections EzyCap, Ezyreveal, Cavkit, Fastcap and Ezy Pelmet are designed to provide a quick and economical method for the finishing and capping of plasterboard. Manufactured from cold rolled form steel providing a strong and secure section, that is durable and fast to install.

Components

Table 112

| PART NO | DESCRIPTION |
|---------|-----------------------------------|
| RA- | EzyReveal Angle x 0.75BMT |
| EC- | EzyCap Section x 0.75BMT |
| CAV- | CavKit Closer Cap x 0.75BMT |
| FCP- | FastCap Profile Rebate x 0.75BMT |
| SL- | Custom Shadowline Angle x 0.75BMT |

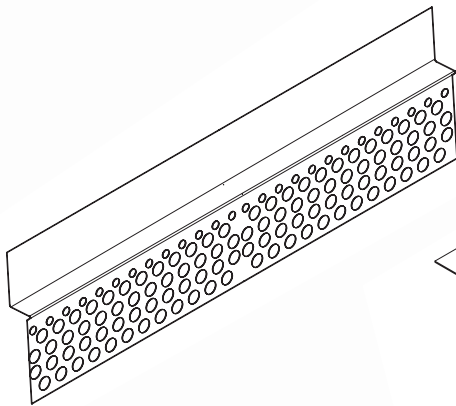
EzyReveal

EzyPelmet

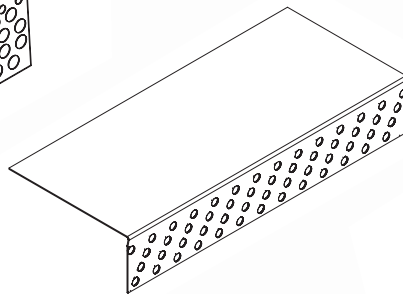
FastCap

EzyCap

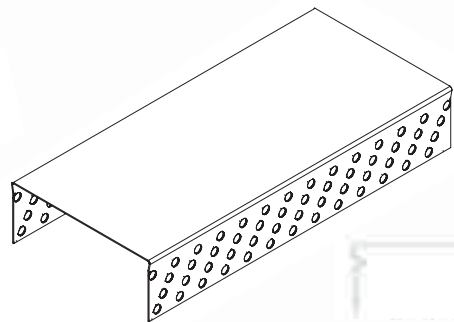
CavKit



SL - Custom Shadowline Angle
Custom sizes manufactured to your project requirements.



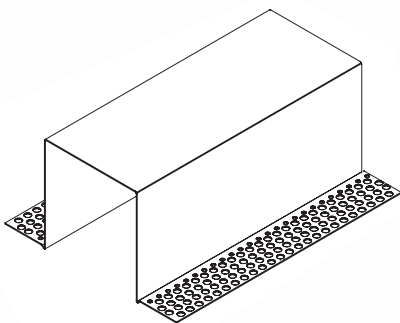
RA - EzyReveal
Quick and economical finishing of reveals.



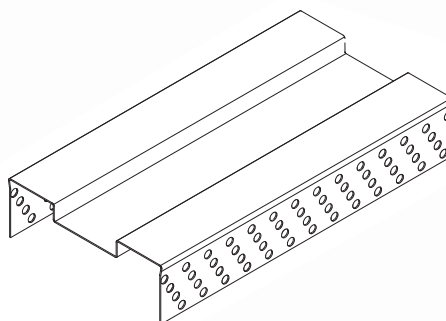
EC - EzyCap
The strong and versatile alternative to stop ends.



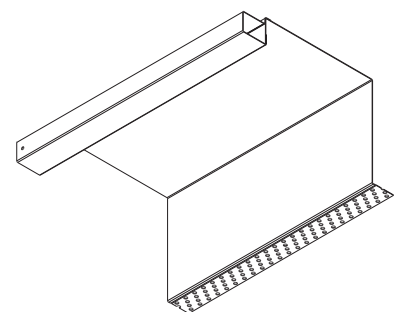
Shadowline EzyCap



FCP - FastCap
Custom finishing sections.



CAV - Cavkit Closer Cap
Flush finish cavity slide closer cap.



EzyPelmet
Flush finish pelmet section

EzyReveal Installation Guide

EzyReveal is designed for quick and economical finishing of window reveals. Manufactured from cold rolled steel providing a strong and secure reveal eliminating warping, twisting, cracking and damage from UV rays. EzyReveal can be used with PVC finish trim to create custom size reveals. EzyReveal can be used as window trim, reveal, finishing rebates in plasterboard.

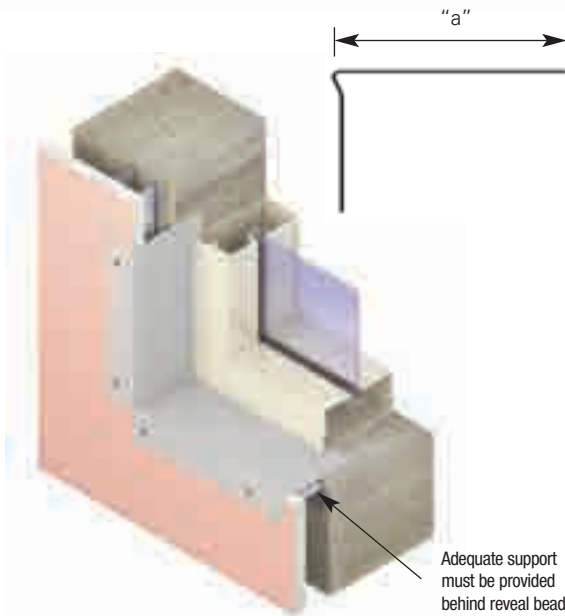


Table 113

| EZYREVEAL | | |
|-------------------|---|-----------|
| Section Width "a" | Description | Part No.s |
| 20mm | EZY-REVEAL 20mm REVEAL ANGLE X 0.75BMT | RA20 |
| 25mm | EZY-REVEAL 25mm REVEAL ANGLE X 0.75BMT | RA25 |
| 30mm | EZY-REVEAL 30mm REVEAL ANGLE X 0.75BMT | RA30 |
| 35mm | EZY-REVEAL 35mm REVEAL ANGLE X 0.75BMT | RA35 |
| 40mm | EZY-REVEAL 40mm REVEAL ANGLE X 0.75BMT | RA35 |
| 45mm | EZY-REVEAL 45mm REVEAL ANGLE X 0.75BMT | RA45 |
| 50mm | EZY-REVEAL 50mm REVEAL ANGLE X 0.75BMT | RA50 |
| 60mm | EZY-REVEAL 60mm REVEAL ANGLE X 0.75BMT | RA60 |
| 65mm | EZY-REVEAL 65mm REVEAL ANGLE X 0.75BMT | RA65 |
| 75mm | EZY-REVEAL 75mm REVEAL ANGLE X 0.75BMT | RA75 |
| 80mm | EZY-REVEAL 80mm REVEAL ANGLE X 0.75BMT | RA80 |
| 90mm | EZY-REVEAL 90mm REVEAL ANGLE X 0.75BMT | RA90 |
| 100mm | EZY-REVEAL 100mm REVEAL ANGLE X 0.75BMT | RA100 |
| 110mm | EZY-REVEAL 110mm REVEAL ANGLE X 0.75BMT | RA110 |
| 120mm | EZY-REVEAL 120mm REVEAL ANGLE X 0.75BMT | RA120 |
| 135mm | EZY-REVEAL 135mm REVEAL ANGLE X 0.75BMT | RA135 |
| 150mm | EZY-REVEAL 150mm REVEAL ANGLE X 0.75BMT | RA150 |

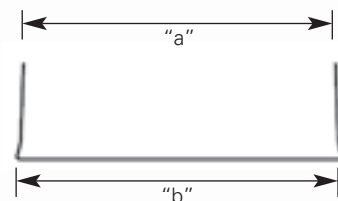
EzyCap Installation Guide

EzyCap is the strong and versatile alternative for stop ends. Manufactured from cold rolled steel providing a strong and secure wall end cap that is both durable and fast to install. Hard to reach wall ends are made possible with EzyCap. EzyCap can be used for the capping of internal balustrades, window openings and internal partition wall ends. EzyCap is available in a range of sizes to suit various wall configurations.



Table 114

| EZYCAP | | | |
|-------------------|-------------------|--------------------------------|-----------|
| Section Width "a" | Section Width "b" | Configuration Stud and Plaster | Part No.s |
| 79mm | 84mm | 51 stud + 13 + 13 | EC79 |
| 86mm | 91mm | 64 stud + 10 + 10 | EC86 |
| 92mm | 97mm | 64 stud + 13 + 13 | EC92 |
| 98mm | 103mm | 76 stud + 10 + 10 | EC98 |
| 104mm | 107mm | 76 stud + 13 + 13 | EC104 |
| 111mm | 116mm | 92 stud + 10 + 10 | EC112 |
| 120mm | 125mm | 92 stud + 13 + 13 | EC118 |
| 127mm | 132mm | 92 stud + 16 + 16 | EC127 |



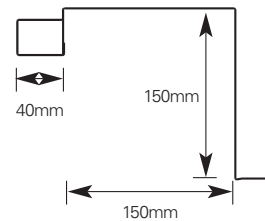
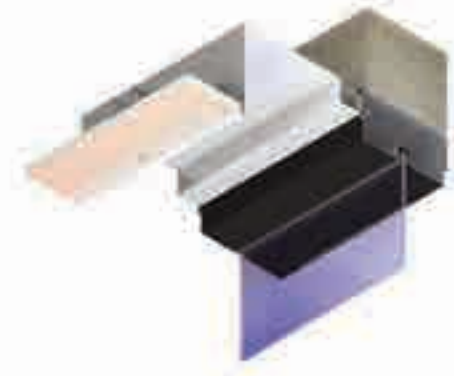
EzyPelmet

The newest addition to the EZY family of flush-finish products adds a completely new dimension to the internal perimeter of square-set interiors. Window blinds disappear, feature lighting is cleverly concealed and vast panoramas open up before your eyes with the all new EzyPelmet® from Studco.

EzyPelmet® is a two piece, pre-finished cold-rolled steel section which provides a fast, economical and prestigious solution for creating recessed window pelmets in plasterboard ceilings. It provides a simple and discrete transition between the interior ceiling and external windows, curtain wall facades or the building structure.

- Contemporary, clearview design
- Flush-finish edge for square-set interiors
- Completely concealed fixings
- Does not require fixing from the top
- Finished in white, no need to paint
- Install from below after ceiling
- Fastest method for creating window pelmets
- Suitable for blinds, curtain, lights & more

EzyPelmet® is at home in apartments, offices, hospitals, schools, houses and just about any other application where a luxurious, clearview outlook is sought.



CavKit Closer Cap

Custom Cavkit can be used to transform standard cavity sliders into architrave free, flush finish cavity sliders. The Standard Cavkit is made up of the EzyReveal and EzyCap to trim and cap the plaster edges around the door penetration. Custom made closer caps can be produced to suit any specification, see Fig 1.

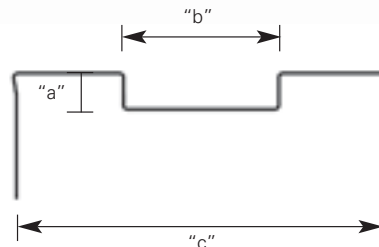


Fig. 1 Custom Cavkit Closer Cap - Specify the 'a', 'b' and 'c' dimensions to suit project requirements

Custom Finishing Sections

Custom finishing and capping of plasterboard is made easy with the FastCaps range of custom made finishing sections. FastCaps custom profiles make the finishing of difficult plasterboard profiles, rebates and large oversized rebates a dream.

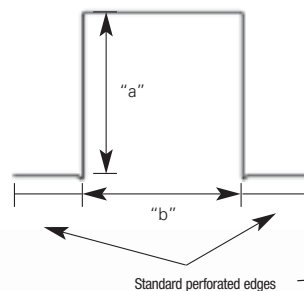
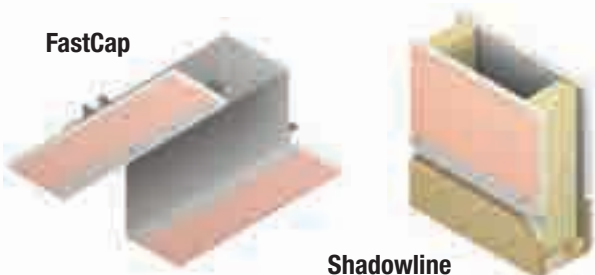


Fig. 2 FastCap - specify the 'a' and 'b' dimension to suit project requirements.

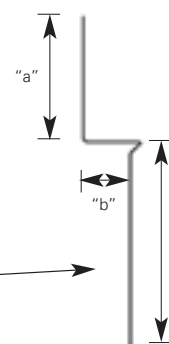


Fig. 3 Custom Shadowline - specify the 'a' and 'b' dimension to suit project requirements

NOTES:

A large rectangular area filled with a light gray grid pattern, intended for writing notes. The grid consists of small squares and covers most of the page's vertical space.



PH: 1800 STUDCO

Customer Service Hotline

1300 255 255

Studco Australia Pty Ltd

Head Office:

130-140 Merrindale Drive

Croydon South VIC 3136

T: (03) 9737 2500

F: (03) 9737 2555

E: sales@studcosystems.com.au

W: www.studcosystems.com.au

New South Wales

11 Avalli Road, Prestons NSW 2170

Queensland

17 Telford Circuit, Yatala QLD 4207

Western Australia

11 Beete Street, Welshpool WA 6106

North America

Studco Building Systems US LLC

1700 Boulter Industrial Parkway

Webster, NY 14580

T: +1 800 675 8023

F: +1 585 545 3010

E: sales@studcosystems.com

W: www.studcosystems.com

United Kingdom

Studco Building Systems UK Ltd

Unit 3 Europark, A5 Watling Street

Rugby, Warwickshire CV23 0AL

T: 020 3488 9655

E: sales@ezconcept.co.uk

W: www.ezconcept.co.uk