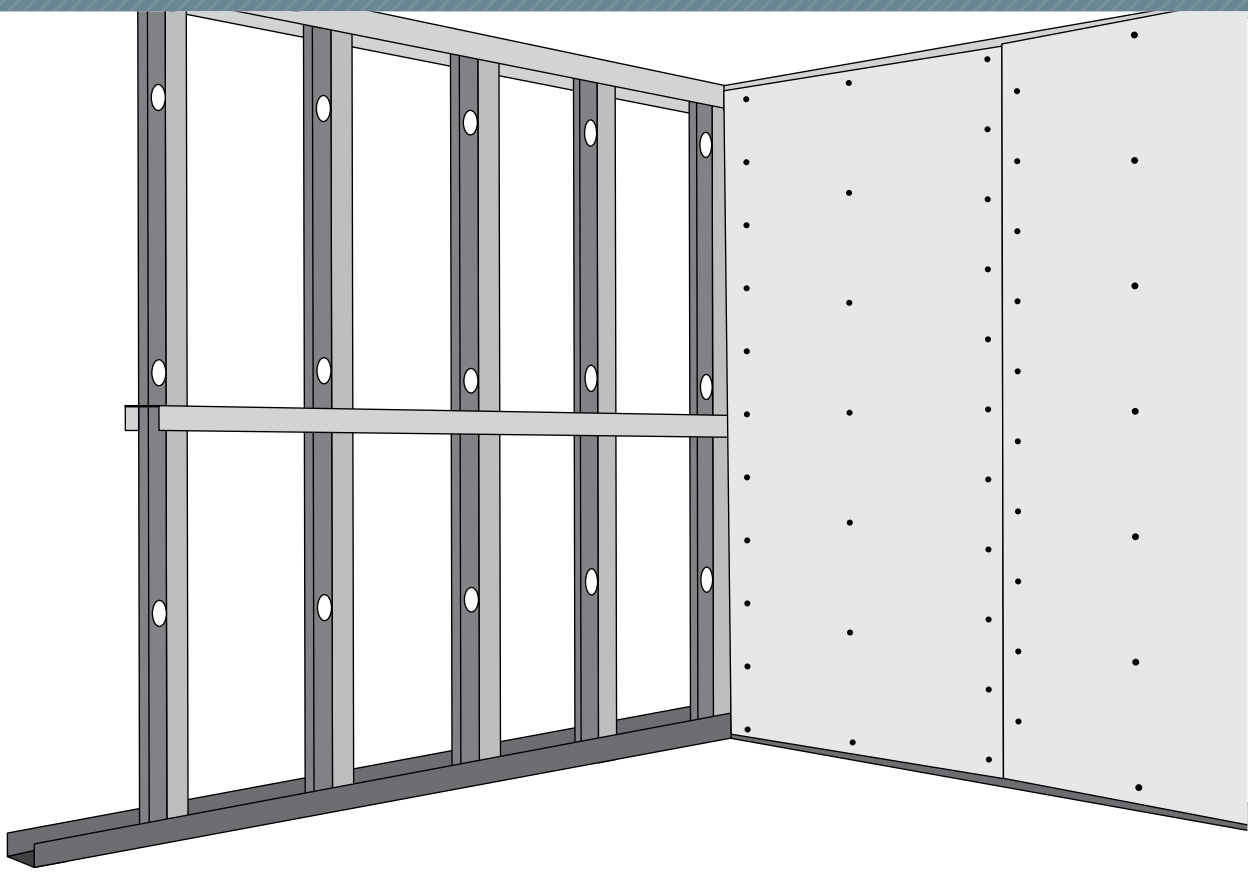
rollformers
2000 LTD

STEEL STUD AND TRACK SYSTEMS

DESIGNED TO EXACTLY REPLACE TIMBER

- Strength
- Stability
- Accurately Dimensioned
- Lightweight
- Location pattern for fixing
- Easy to handle
- No movement
- No moisture
- No nail popping



rollformers 2000 LTD

Rollformers has been serving the New Zealand construction market with good quality cost competitive steel formed products such as Ceiling Battens, Roofing Battens and Steel Studs for the last 25 years. The company prides itself on innovation and customer service.

CUSTOM PRODUCTS

Rollformed products, custom produced to your exact dimensions, for your specific end use please contact:

Rollformers 2000 Ltd
Phone: +64 9 274 4898 Fax: +64 9 274 0451
55 Allens Rd, East Tamaki, Auckland
PO Box 204-352 Highbrook, Manukau 2161, New Zealand

ROLLFORMERS PRODUCTS

The following is a selection of Rollformers products:

Top Hats: Spans up to 12 metres

Studs, Track & Noggins: For domestic and commercial use, load and non load bearing

Ceiling Battens: For timber or steel framed buildings

Roof and Tile Battens: For timber or steel

Specific Profiles: Replacing timber for may different uses

PRODUCER STATEMENT

Rollformers 2000 Ltd produce galvanized steel stud and track to meet the requirements of the building industry for lightweight, strong, and versatile steel wall framing. All studs are manufactured in accordance with NZS/AS 1397-1993 and are able to be used in fire and sound rated situations up to a height of 7.2 metres. For requirements over and above this please contact Rollformers technical department.

Stud

Rollformers manufacture stud in widths of 51mm, 63.5mm, 75mm, 89mm, 92mm and 150mm and in material thickness of 0.55mm, 0.75mm & 1.15mm.

All studs have an 34mm-face height. Both faces have a knurled finish, which assist the installer in the installation of the product by resisting screw slippage and provide additional holding power for the adhesive.

Track

Track is manufactured in 3.0m lengths and is manufactured in the same widths and gauges as steel stud in order to meet national standards.

BPIR

Rollformers Steel Stud & Track systems are not impacted by BPIR regulations as they are manufactured off site.

Standards

The design tables and material properties and including any test data contained in Rollformers brochure have been formulated with the following New Zealand and International standards.

AS/NZS/ 4600:2005: Cold Formed Steel Structures

AS/NZS/ 1170:2002: Structural Design Actions

NZS2589-1:1997: Particle Board Lining for Residential and Light Commercial Construction

NZ BUILDING ACT: 2004

NZ BUILDING REGULATIONS 1992

NZ BUILDING CODE HANDBOOK:

- B1 - STRUCTURAL
- B2 - DURABILITY
- E3 - INTERNAL MOISTURE
- F2 - HAZARDOUS BUILDING MATERIALS
- G6 - AIRBORNE AND IMPACT SOUND
- G9 - ELECTRICITY
- G10 - PIPED SERVICES
- G12 -WATER SUPPLIES
- H1 - ENERGY EFFICIENCY

Please Note: When designing internal or external load bearing walls you should contact the Rollformers Technical Department for advice on suitable steel stud sizing and other related information pertaining to safe working loads and heights.

Note

Rollformers management advise that Steel Stud and Track will meet the above standards as long as they are used within the guidelines in our published literature.

Stud & Track

Rollformers Steel Stud and Track specifications detailed in the following installation pages will provide contractors and builders with a versatile and durable framing system, manufactured to Australian and New Zealand standards.

The design tables have been formulated using recognised Australian, New Zealand and American standards, together with industry standards developed over the years and substantiated through laboratory testing and external relevant information.

This will provide designers and contractors with a 'user friendly' method of installing drywall steel stud wall and ceilings.

Construction of partition, fire rated or sound rated walls can be achieved using the Rollformers stud and track components. The information pertained in the following installation pages do not account for fire or sound ratings. Please refer to the fire rated information attached to this document. Relevant information retaining to these ratings are specified by various building board manufacturers throughout New Zealand and Australia.

ADVANTAGES OF STEEL STUD AND TRACK

- Steel framing has been used in commercial applications for over 50 years.
- Rollformers steel framing has weight advantages up to 20% of equivalent size single brick rendered wall.
- Drywall construction eliminates wet trades, and allows earlier finishing of walls.
- Large quantities of metal components can be readily transported and craned into position on site.
- Steel Stud lined with plasterboard offer excellent sound transmission loss properties.
- Rollformers manufactures studs in various gauges and sizes which allows walls up to 7.2m in height to be constructed and as all products are manufactured in NZ we have the unique ability to roll form any size or length at short notice on special request.
- 0.55 and 0.75 BMT studs may be 'boxed' to provide extra strength at wall openings or where the studs carry additional loads such as shelving.

PRODUCT, HANDLING, STORAGE, MAINTENANCE AND INSTALLATION

- Product should be kept as dry as possible in both storage and transit.
- Storage must be taken to ensure the product is not damaged during the transportation, storage or installation process.
- No product should be installed in areas where it has prolonged contact with moisture.
- Product should not be used for that which is not designed for and that which exceeds capabilities of said product.
- All bracing must be correctly and completely installed prior to any loads placed on said structures.
- Gas cutting of holes or welded additions are not recommended as each may cause an unacceptable loss of strength to the product.
- Keep surfaces clean as possible, free from debris and moisture .
- If possible, inspect the stud and track when in storage for corrosion. If corrosion is visible, wipe down and stack so product can dry.

USAGE OUTSIDE THE STIPULATED GUIDELINES

If there is a requirement for the use of Rollformers Stud & Track outside the stated limitation and or procedures given in this or any other literature, you must contact Rollformers 2000 Ltd before proceeding with the specific project. For further information on the range of different and versatile products that Rollformers 2000 manufacture, please do not hesitate to give any of the sales team a call on +64 9 274 4898.

STANDARDS

The design tables and material properties and including any test data contained in Rollformers brochure have been formulated with the following New Zealand and international standards.

AS/NZS/4600 : 2005:	Cold Formed Steel Structures
AS/NZS/1170 : 2002:	Structural Design Actions
NZS 2589-1 : 1997:	Gypsum Board Lining for Residential and Light Commercial Construction.

NZ Building Act : 2004

NZ Building Regulations 1992

NZ Building Code Handbook:

B 1 - Structural
B 2 - Durability
E3 - Internal Moisture
F2 - Hazardous Building Materials
G6 - Airborne and Impact Sound
G9 - Electricity
G10 - Piped Services
G12 - Water Supplies
H1 - Energy Efficiency

Please note when designing internal or external load bearing walls you should contact the Rollformers Technical Department for advice on suitable steel stud sizing and other related information pertaining to safe working loads and heights.

Rollformers 2000 Ltd

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To our valued customers,

With concern we issue this letter in regard to the apparent confusion over the use of steel stud in fire rated wall applications. Until this is clearly quantified, Rollformers 2000 Ltd will only provide product that has a minimum steel thickness of 0.55mm in fire rated applications.

It is our understanding that this will confirm to the wall board manufacturer's recommendations and advice should be sought from this industry in all situations where further clarification is required.

Kind Regards

Peter Taylor

Reference:

BRANZ reports (BRANZ, 1990) and FR 1722 (BRANZ, 1992) describe the testing of two full-scale non-load bearing LSF drywall systems. In both tests the studs were held in top and bottom channels by 'friction-fit' and 15mm clearance we used to allow for free expansion at both ends. The Framing comprised 64 x 30 x 0.55mm thick lipped C-section studs. FR 1579 was lined with one layer of 12.5mm glass-fibre reinforced plasterboard on each side of the frame and FR 1722 was lined with two layers of 12.5mm glass-fibre reinforced plasterboard.

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Stud & Track

Rollformers 2000 Ltd produce galvanized steel stud and track to meet the requirements of the building industry for lightweight, strong, and versatile steel wall framing. All studs are manufactured in accordance with NZS/AS 1397-1993 and are able to be used in fire and sound rated situations up to a height of 7.2 metres. For requirements over and above this please contact Rollformers technical department.

TRACK

Track is manufactured in 3.00m lengths and is manufactured in the widths and gauges to match the appropriate stud.

STUD

Rollformers manufacture stud in widths of 51mm, 63.5mm, 75mm, 89mm, 92mm and 150mm and in material thickness of 0.55mm bmt, 0.75mm bmt, and 1.15mm bmt.

All studs have a 34mm-face height. Both faces have a knurled finish, which assist the installer in the installation of the product by resisting screw slippage and provide additional holding power for the adhesive.

STUD STOCK

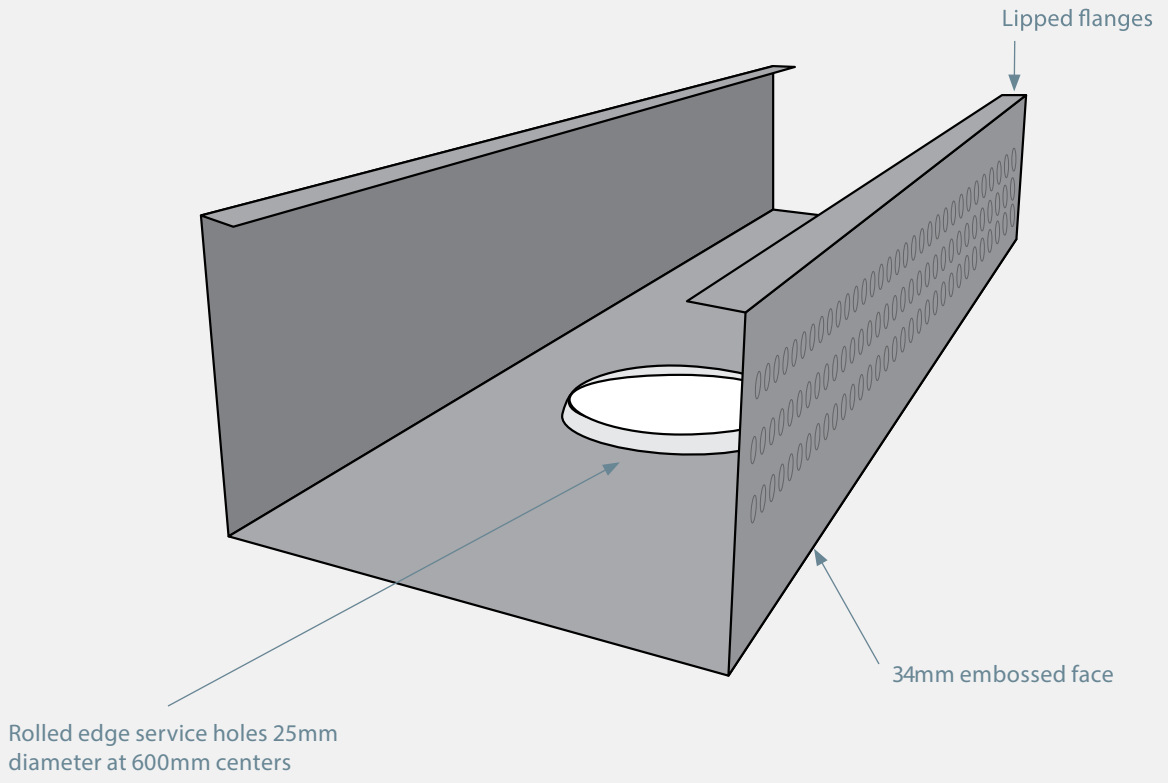
Width (mm)	Material Thickness (mm)	Length (m)
51	0.55/0.75	2.4/3.0/3.3
63.5	0.55/0.75/1.15	2.4/3.0/3.3/3.6
89	0.55/0.75/1.15	2.4/2.7/2.8/3
92	0.55/0.75/1.15	3/3.6

Standard Stud Stock lengths as per above chart are in 51mm, 63.5mm and 92mm with some of the common lengths of 2.400m, 2.700m, 3.300m and 3.600m.

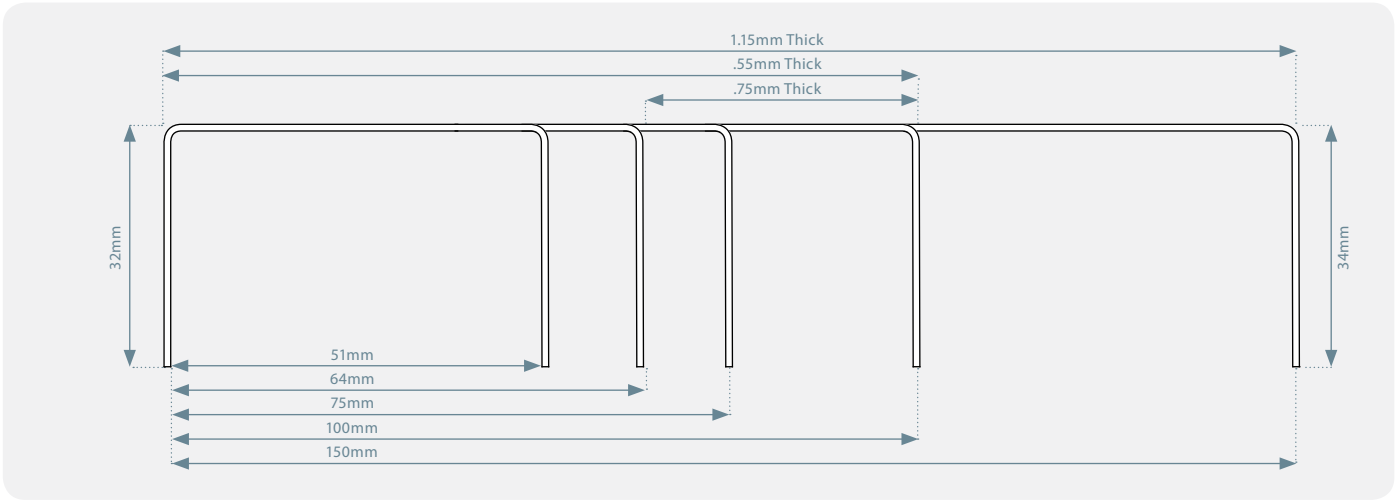
STUD MADE TO ORDER

Width (mm)	Material Thickness (mm)	Length (m)
75	0.55/0.75/1.15	Any
150	0.75/1.15	Maximum 9.5

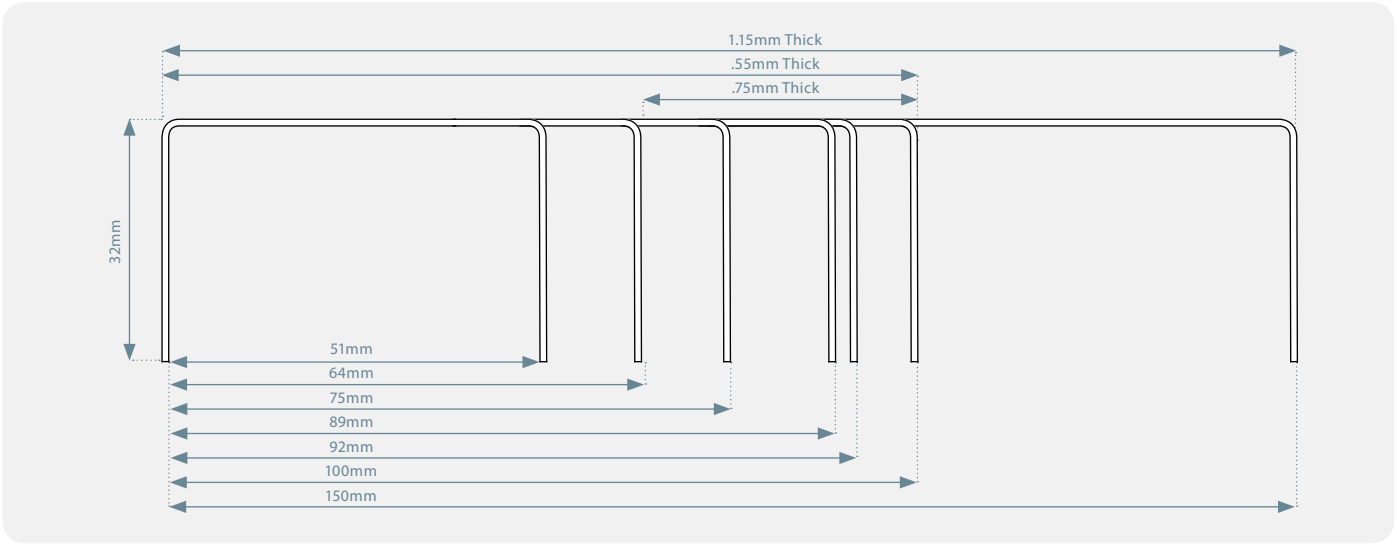
The 75mm and 150mm stud and non-standard lengths are manufactured to order and generally require a lead time of 3-5 working days.



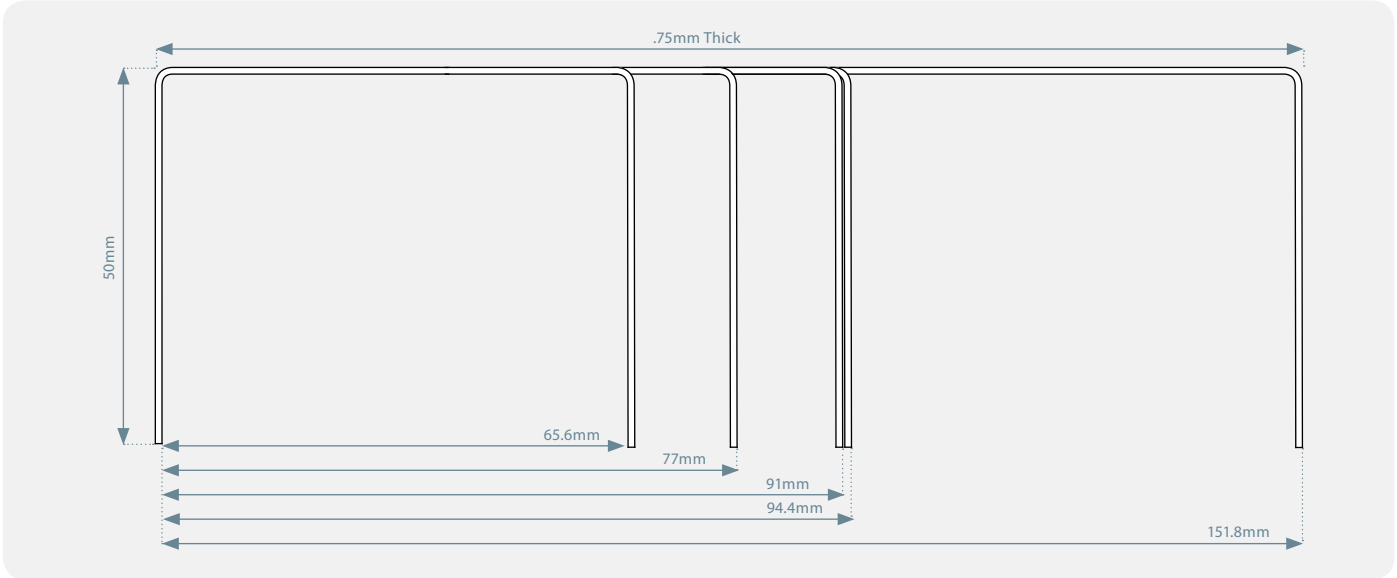
Wall Stud



Wall Stud Dimensions



Wall Track Dimensions



Deflection Head Track Dimensions

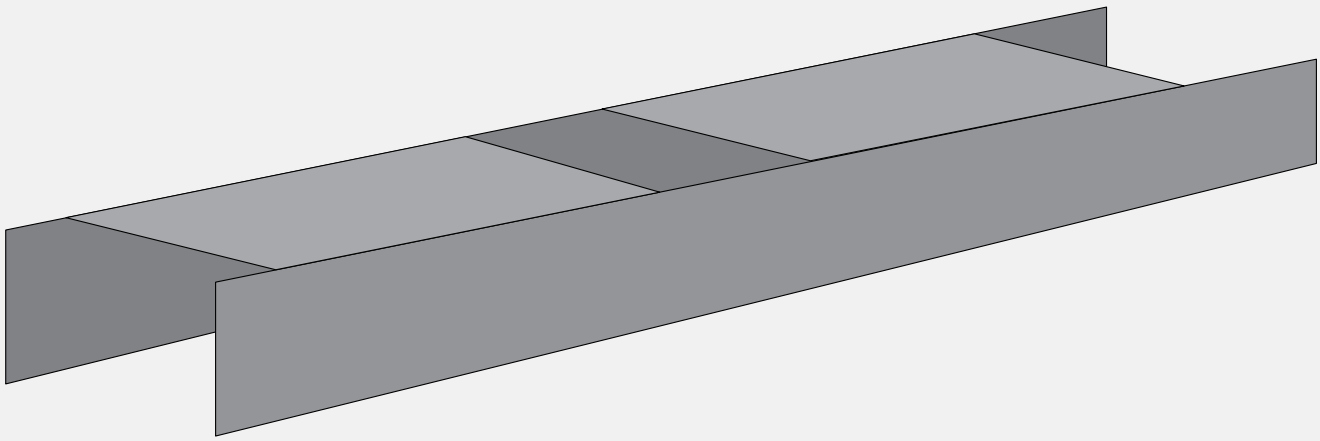
Nogging Tracks

Nogging Tracks are designed to provide support to the wall studs and prevent twisting of the studs when fitting plasterboard and linning.

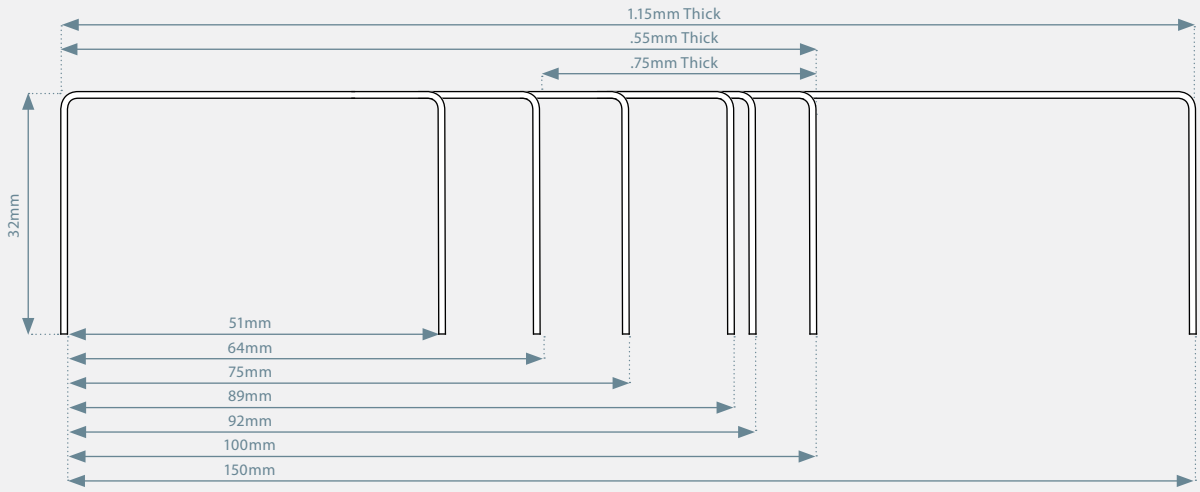
Nogging Track is provided in 3.00m lengths and is manufactured in the widths and gauges to match the appropriate stud. Individual Noggings may be cut form continuous lengths.

Our nogging track stock widths are in 51mm, 63.5mm, 89mm, 92mm and 150mm.

NOGGING TRACK SIZES		
Width (mm)	Material Thickness (mm)	Length (m)
51	0.55/0.75	3
63.5	0.55/0.75/1.15	3
89	0.55/0.75/1.15	3
92	0.55/0.75/1.15	3
150	0.55/0.75/1.15	3



Nogging Track



Nogging Track Dimensions

Installation

GENERAL

Top and bottom track should be fixed at 600mm. There are no requirements to isolate the track sections from the slab, unless specifically stated.

CONCRETE FASTENERS

M4.5 Dynabolt, or 2.4 Dia x 32 penetration powder actuated fasteners (provided distance to edge is not less than 75mm), or other suitable fasteners with a working load shear of 0.75KN.

For fixing into concrete at a slab edge, it is essential to observe the fasteners manufactures stated edge distance limitations.

STEEL FASTENERS

Self tapping screw 6 gauge/20 threads per inch, or other suitable fasteners with a working load shear of 0.75KN.

TIMBER FASTENERS

Self tapping screw type 17 screw, size number 8 for unseasoned hardwood or seasoned softwood, or other suitable fasteners with a working load shear of 0.75KN.

STUDS

Cut studs 6mm shorter than floor to ceiling height to allow for height variation and expansion.

Screw fixes the first and last studs of each wall panel to the top and bottom track. Insert the intermediate studs into the floor and ceiling tracks, which have tapered flanges for a friction fit.

Space studs at centres specified, set plumb and square, and twist into position. If possible, the open side of the stud should face the direction from which the plasterboard installation is begun.

NOGGING TRACKS

Nogging Tracks should be screwed, or crimped to both flanges of the studs.

Rollformers manufactures a continuous nogging track which can be fitted to the stud framing in one length, or individual noggings may be cut from the track.

When installing services a recessed nogging may be required, this may be cut from stud or track.

Timber noggings may be fitted to the studs by nailing or screwing through the web of the studs into the nogging. Heavy fixtures may be fitted to the wall framing by fabricating custom nogging.

The minimum number of noggins required may be determined in Table 1 within the specifications section.

DEFLECTION HEADS

Required where specified by the structural engineer, replacing top track. Installation is as for standard top track. Do not screw end or any studs to the deflection head track

FIRE RATED & SOUND RATED WALLS

For fire rated walls and where the sound reduction is required, detailed references can be found in technical guides provided by manufacturers of internal drywall products.

As a general rule, the design intent of Rollformers stud wall systems caters for quick and simple installations.

This rule also applies to fire and sound rated walls providing industry guidelines are followed during construction.

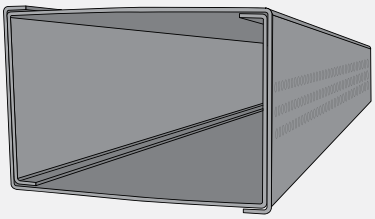
ADDITIONAL REQUIREMENTS

- External walls required to resist uplift may require special fasteners, specified by the building designers.
- For fire rated walls, caulk any gaps between the tracks and surface irregularities.

SPECIAL INSTALLATION REQUIREMENTS

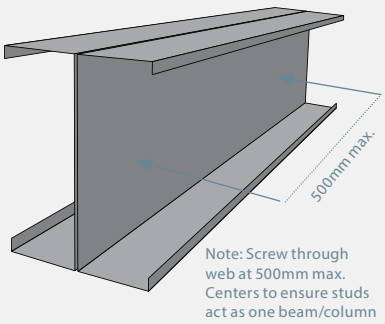
Installation of track, stud and plasterboard is as for wall generally, except as described herein.

- Caulk any gaps between the tracks and surface irregularities above and below
- For /120/120 and /90/90 walls cut studs 20mm shorter than clear floor to ceiling height, to ensure a minimum gap of 15mm at the top of the stud
- All Stud/Track connections must be restricted to friction fit. Do not screw, rivet, clinch, weld or otherwise mechanically fasten any stud to tracks
- Plasterboard in single layer systems must be fixed vertically. Ensure that joins on opposite sides of the wall and in multiple layers do not fall the same stud
- On the second side of the wall, cut and fix the plasterboard so the joints will be staggered on the alternate studs from the joints on the first side
- Any horizontal joins in vertically fixed sheets (i.e. in high walls) must be backed by a continuous noggins and screwed at 200mm each sheet, staggered across the joint.
- For two layered systems, cut and fix the second layer so that second layer joints fall on different studs to the first layer
- Where a deflection head is specified, plasterboard sheets must be cut to allow a 20mm gap at the top
- Any gaps at the top of the plasterboard sheet must be filled on both sides with fire grade mastic
- Plasterboard must not be screwed to floor or ceiling tracks or deflection heads



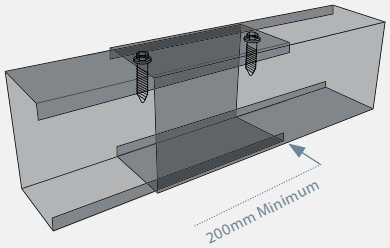
Boxed Studs

- 0.55 & 0.75 BMT Studs can be boxed together for openings as well as heavier load applications.
- Please specify on order if Boxed Studs are Required



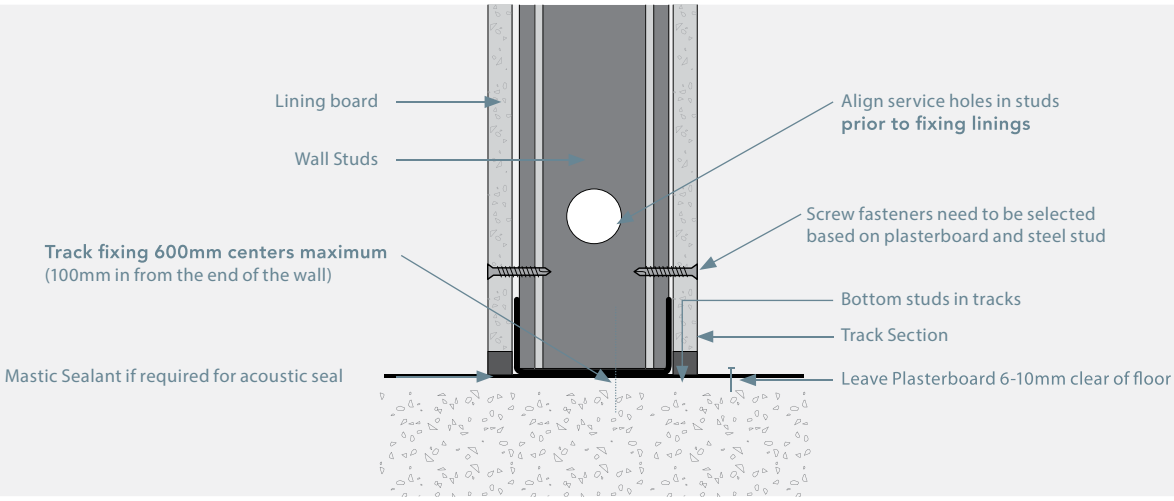
Wall Studs "Back to Back"

- Wall Studs at BMT 1.15 fixed "Back to Back" can provide greater rigidity at doorways, openings and to support heavy fixtures.

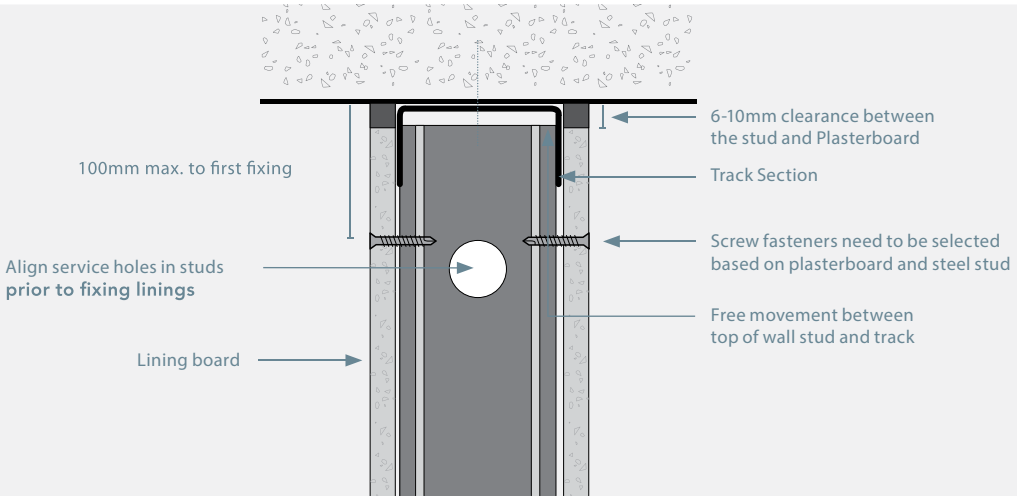


Wall Studs "Spliced"

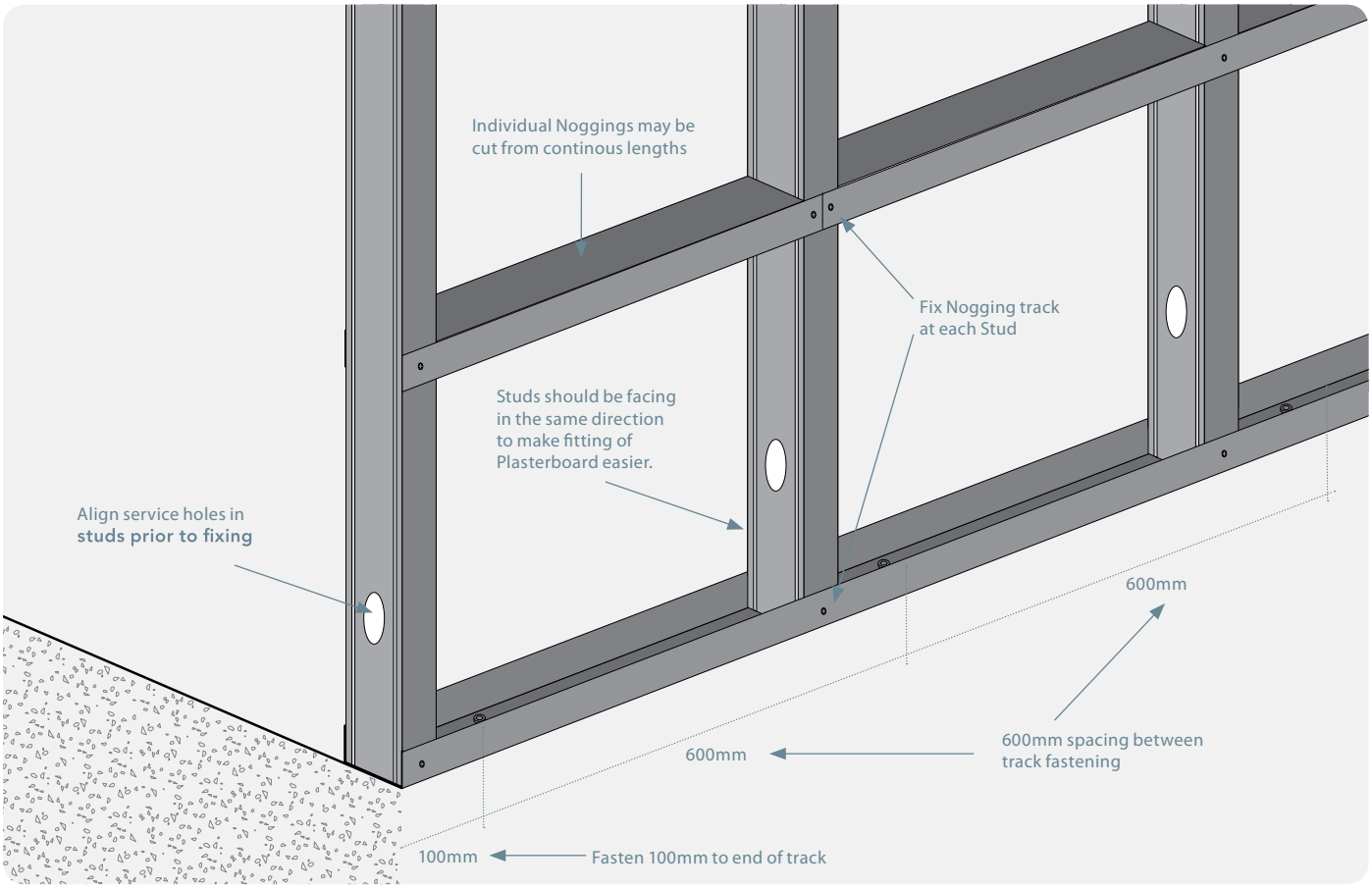
- 200mm Minimum Overlap Required



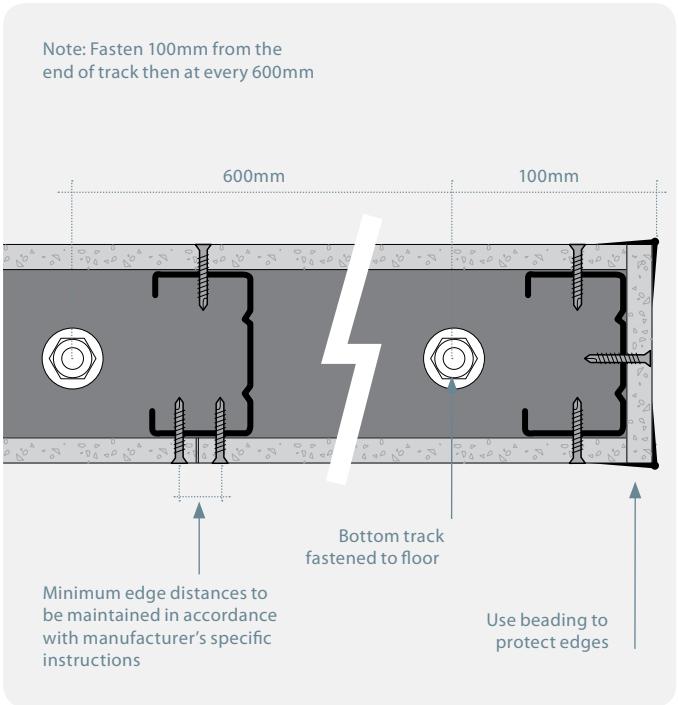
Track and Stud Fixing to Floor



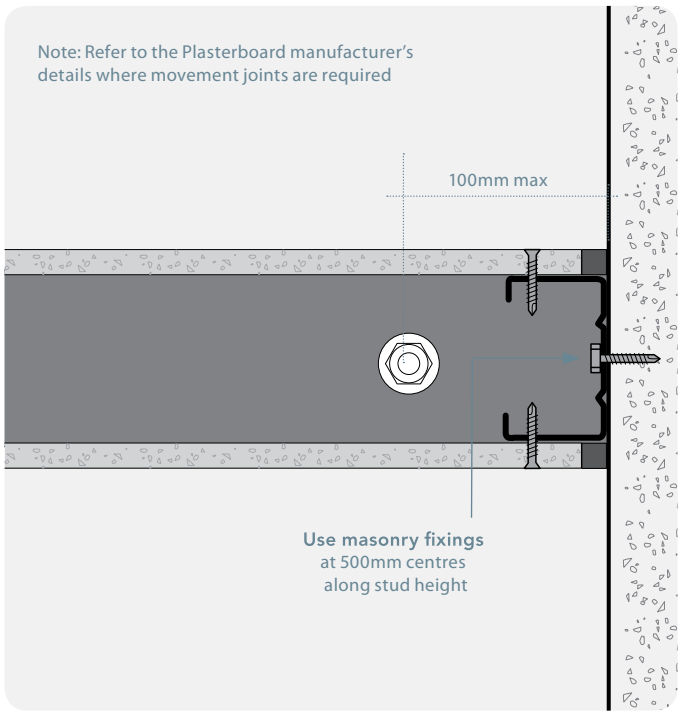
Track and Stud Fixing to Ceiling



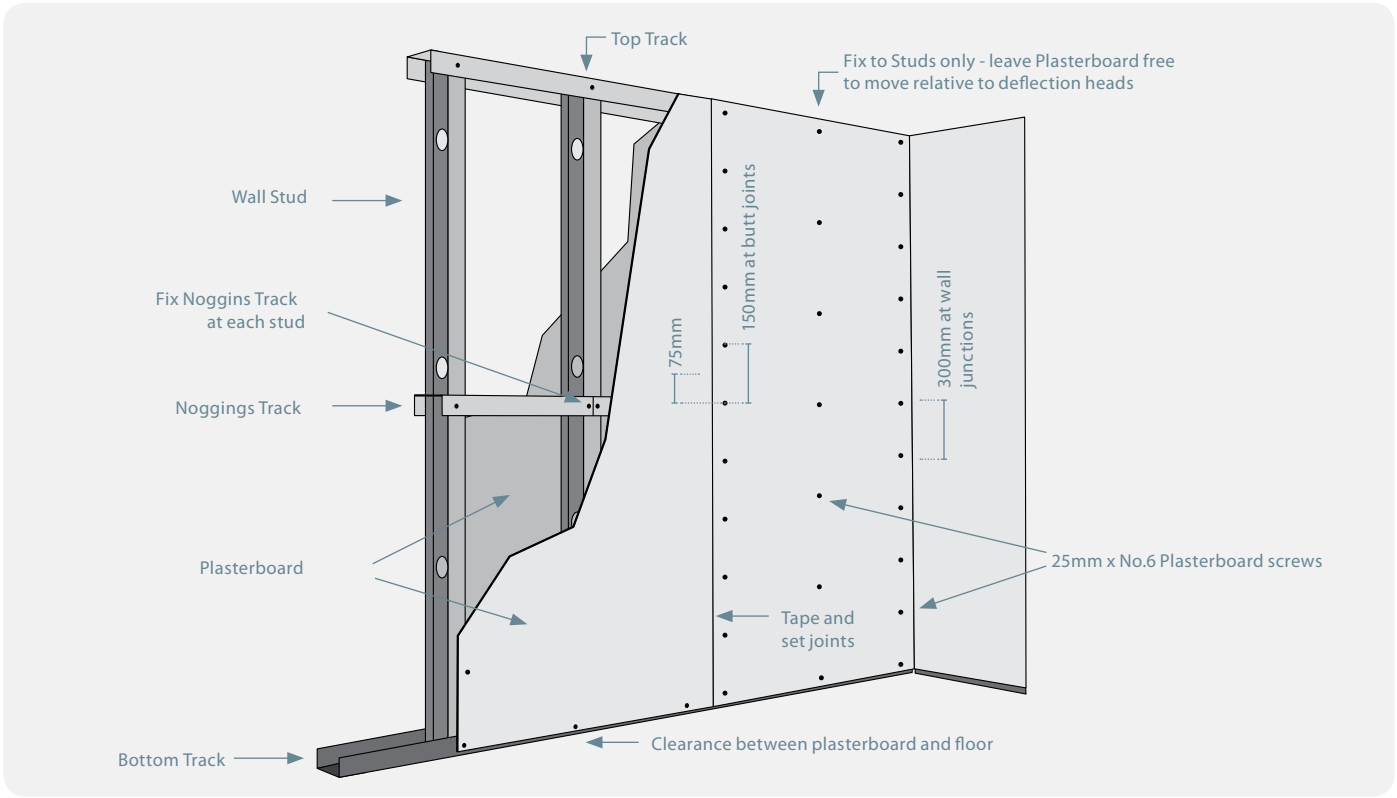
Track, Stud and Nogging Fixing



Freestanding Wall End

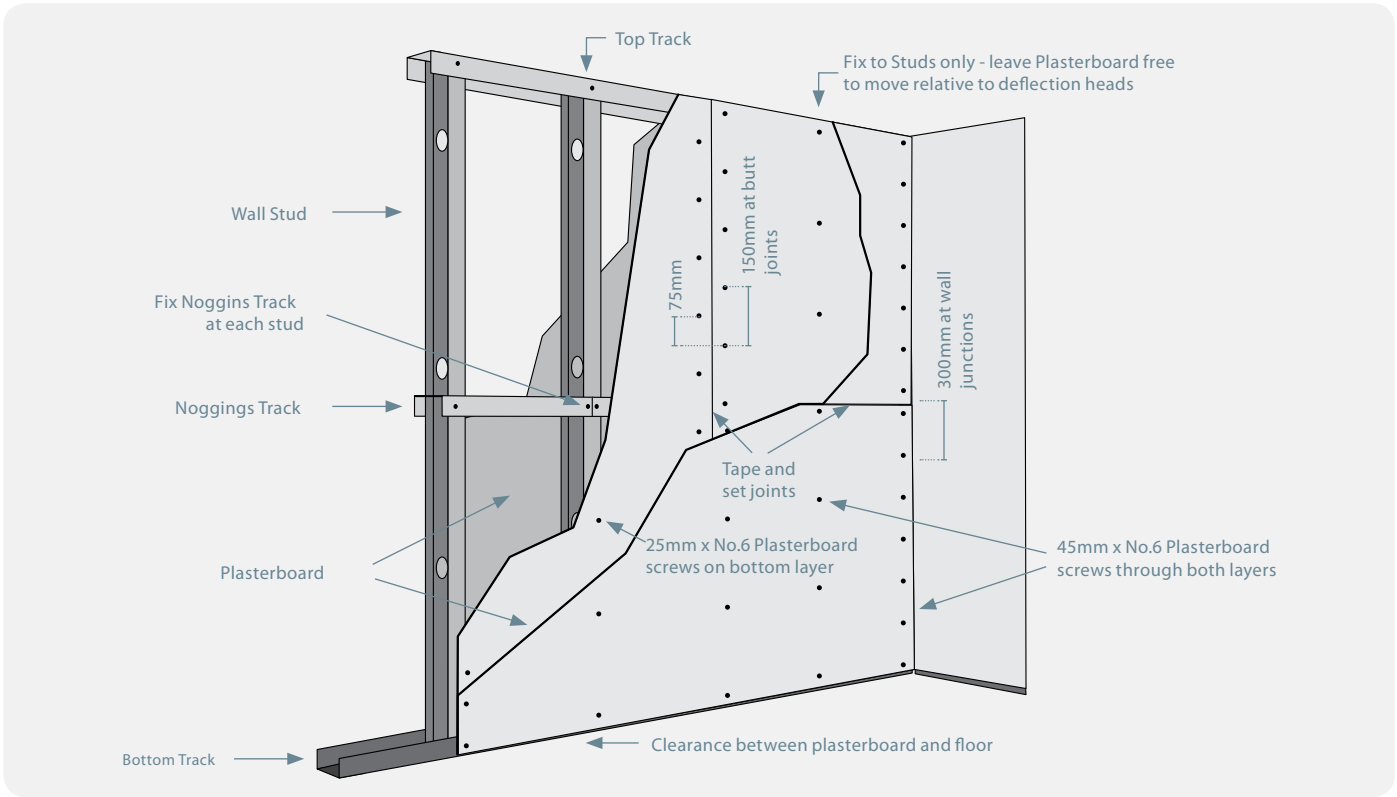


Wall End Fixed to Masonry



Plaster Board Installation - Vertical

• Indicative Only - refer to plasterboard manufacturer's specific instructions



Plaster Board Installation - Vertical/Horizontal Double Layer

• Indicative Only - refer to plasterboard manufacturer's specific instructions

Specifications

ROLLFORMERS STEEL STUD:

Can be manufactured to length, reducing material wastage and saving on site labour costs. Pre punched service holes with protected edges are provided at 600 centres starting 300mm from the bottom of the stud, this makes it easier for installation of electrical and plumbing services, saving you time and money.

- It has advantages over wood by being able to fix lining material immediately after installation of steel framing.
- Provides a constantly higher quality of substrate for lining material with the comfort of knowing that there will be no wrapping, splitting or shrinkage. Steel Stud can be boxed to provide extra strength.

GUIDELINES FOR MAXIMUM WALL HEIGHTS FOR INTERNAL LOAD BEARING WALLS

All partitions should be designed to specific application for stiffening. This ensures that the wall will have sufficient level of strength and stiffness. These loads can occur when high winds are present or when doors and windows are open .

All walls are assumed to be non-load bearing.

Specific designs will nominate the correct sizes and gauges for specific loadings.

Specific design of the wall systems must be carried out by the appropriate personal using the following table and performance criteria as a basis for stud selection.

PLEASE REVIEW THE NON-LOAD BEARING WALL CHART GUIDES

Face loading and soft body testing combined with the respective deflection criteria has resulted in sufficient strength and wall stiffness of reasonable to that of a traditional timber wall.

The table below is derived from external wind exposure categories in accordance with AS/NZS 1170 using an internal differential pressure coefficient equal to 0.6. Wind pressures are listed in each category for ease of use with NZS 4205:1992.

Stud heights in brackets may apply where soft body impact loads not applicable. Special consideration to design must be given where heavy loads are suspended from walls.

Stud Size Studs at 600mm Centres with a minimum of one layer of 13mm Gib Plasterboard each side				
Exposure	Low (0.53kPa)	High (0.71kPa)	Low (1.00kPa)	V High (1.30kPa)
63/0.55 Base Metal Thickness	2.55 (3.35)	2.55 (3.05)	2.55 (2.70)	2.50
89/0.55 Base Metal Thickness	4.60	4.25	3.75	3.25
Stud Size Studs at 400mm Centres with a minimum of one layer of 13mm Gib Plasterboard each side				
Exposure	Low (0.53kPa)	High (0.71kPa)	Low (1.00kPa)	V High (1.30kPa)
STUD 63.5/0.75	2.40 (3.35)	2.40 (3.20)	2.40 (2.85)	2.40 (2.60)

TABLE 1:
MAXIMUM WALL HEIGHTS FOR INTERNAL NON-LOAD & NON FIRE RATED WALLS

RF Minimum Number of Noggins Versus Wall Heights		
Wall Height (m)	Lining Set Up	Required Numbers of Noggins
0 - 4.4	Lined Both Sides	0
4.8 - 8.8		1
0 - 3	Lined One Side	1
3.0 - 6.0		2
6.0 - 8.0		3
8+		4

TABLE 2:
MAXIMUM WALL HEIGHTS - STUD SPACING OF INTERNAL NON-LOAD & NON FIRE RATED WALLS

Rollformers Stud Size and Base Metal Thickness	Unlined or Lined One Side ONLY			One Sheet 10mm Both Sides			One Sheet 13mm Both Sides			One Sheet 16mm Both Sides		
	300mm	450mm	600mm	300mm	450mm	600mm	300mm	450mm	600mm	300mm	450mm	600mm
STUD 51/0.55	2958	2585	2349	3980	3480	3040	4270	3510	3040	4300	3510	3040
STUD 51/0.75	3273	2860	2599	4160	3640	3310	4430	3870	3520	4600	4020	3630
STUD 51/1.15	3727	3256	2958	4460	3900	3540	4690	4100	3730	4840	4230	3850
STUD 63.5/0.55	3515	3071	2790	4740	4070	3530	4990	4070	3530	4990	4070	3530
STUD 63.5/0.75	3880	3390	3080	4960	4330	3930	5260	4590	4170	5380	4700	4220
STUD 63.5/1.15	4427	3868	3515	5310	4640	4220	5580	4870	4430	5690	4970	4520
STUD 76/0.55	4023	3515	3193	5240	4570	3960	5590	4570	3960	5590	4570	3960
STUD 76/0.75	4427	3868	3515	5510	4810	4370	5850	5110	4640	6290	5470	4730
STUD 76/1.15	5045	4408	4005	5930	5180	4710	6230	5450	4950	6620	5790	5260
STUD 89/92/0.55	4643	4057	3686	5670	4950	4300	6080	4970	4300	6080	4970	4300
STUD 89/92/0.75	5131	4483	4073	6010	5250	4770	6510	5690	5170	7120	6220	5430
STUD 89/92/1.15	5849	5110	4643	6570	5740	5210	6990	6110	5550	7460	6580	5980
STUD 150/0.75	7580	6677	6067	7950	7160	6500	7950	7160	6500	8200	7410	6780
STUD 150/1.15	8371	7564	6924	8650	7820	7270	8650	7820	7270	8850	7990	7440

Notes to Table 2:
- Maximum Deflection limit is (Height/240) to a maximum of 30mm at 0.25kPa
- Maximum Working pressure 0.25 KPa and Serviceability pressure is 0.25kPa
- Studs at 300mm is equivalent to boxed stud pairs at 600mm
- Noggins in accordance with Table 3

TABLE 3:
MAXIMUM WALL HEIGHTS - STUD SPACING OF INTERNAL NON-LOAD & NON FIRE RATED WALLS

Rollformers Stud Size and Base Metal Thickness	Wind Loading and Pressures to AS1170.2 & AS 4055								
	W33/N2 Wind Zone 1 Working Pressure 0.65 kPa Serviceability Pressure 0.40 kPa			W41N/N3 Wind Zone 2 Working Pressure 1.00 kPa Serviceability Pressure 0.60 kPa			W41C/C1 Cyclonic Working Pressure 1.36 kPa Serviceability Pressure 0.60 kPa		
	300mm	450mm	600mm	300mm	450mm	600mm	300mm	450mm	600mm
STUD 51/0.55	2530	2161	1871	2133	1742	1508	1829	1494	1294
STUD 51/0.75	2799	2446	2222	2446	2097	1816	2202	1798	1557
STUD 51/1.15	3126	2784	2530	2784	2433	2210	2784	2328	2016
STUD 63.5/0.55	2991	2519	2182	2487	2031	1759	2133	1741	1508
STUD 63.5/0.75	3222	2899	2617	2899	2437	2110	2559	2090	1810
STUD 63.5/1.15	3557	3215	2991	3215	2890	2626	3215	2699	2338
STUD 76/0.55	3311	2816	2439	2781	2271	1966	2385	1947	1686
STUD 76/0.75	3557	3215	2942	3215	2739	2372	2877	2349	2034
STUD 76/1.15	3924	3546	3300	3546	3204	2982	3546	3025	2620
STUD 89/92/0.55	3687	3091	2677	3052	2492	2158	2617	2137	1851
STUD 89/92/0.75	3974	3591	3342	3591	3127	2708	3284	2681	2322
STUD 89/92/1.15	4385	3962	3687	3962	3580	3332	3962	3443	2981
STUD 150/0.75	5360	4843	4396	4843	4092	3544	4298	3509	3039
STUD 150/1.15	5919	5348	4977	5348	4833	4497	5348	4833	4260

Notes to Table 3:
- Lining material makes no contribution to stiffness for external wind loads
- Maximum Deflection- Height/240 or 30mm
- Studs at 300mm is equivalent to boxed stud pairs at 600mm

TABLE 4: MAXIMUM ALLOWABLE LOAD IN KILOGRAMS PER METER RUN OF SHELF

Rollformers Stud Size and Base Metal Thickness	Permissible Shelf Loadings																	
	Shelf Width 200						Shelf Width 300						Shelf Width 400					
	Number of Equal Spaced Shelves						Number of Equal Spaced Shelves						Number of Equal Spaced Shelves					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Wall Height 2400mm																		
STUD 63.5/0.55	218	109	73	55	44	36	181	91	60	45	36	30	154	77	51	39	31	26
STUD 63.5/0.75	366	183	122	92	73	61	301	151	100	75	60	49	257	129	86	60	50	39
STUD 63.5/1.15	677	339	226	154	128	100	558	279	179	112	93	72	475	238	141	88	73	57
STUD 76/0.55	284	142	95	71	57	47	237	119	79	59	47	40	204	102	68	51	41	34
STUD 76/0.75	465	233	155	116	93	78	387	119	79	59	47	40	204	102	68	51	41	34
STUD 76/1.15	854	427	285	214	171	141	706	353	235	161	133	104	604	302	201	127	105	82
Wall Height 2700mm																		
STUD 63.5/0.55	179	90	60	45	36	30	150	75	50	38	30	25	129	65	43	32	26	22
STUD 63.5/0.75	318	159	106	80	64	53	265	133	88	66	53	44	227	114	76	53	44	34
STUD 63.5/1.15	604	302	201	137	114	89	503	252	168	100	83	64	432	216	125	78	65	51
STUD 76/0.55	246	123	82	62	49	41	207	104	69	52	41	35	179	90	60	45	36	30
STUD 76/0.75	419	210	140	105	84	70	351	176	117	88	70	59	302	151	101	76	60	49
STUD 76/1.15	781	391	260	194	156	126	652	326	217	143	119	92	560	280	180	113	94	73
Wall Height 3000mm																		
STUD 63.5/0.55	141	71	47	35	28	24	181	91	60	45	36	29	154	77	51	36	30	23
STUD 63.5/0.75	268	134	89	67	54	45	301	151	97	61	51	39	257	129	76	48	40	31
STUD 63.5/1.15	529	265	176	124	103	80	558	279	143	90	74	58	475	238	113	70	58	45
STUD 76/0.55	207	104	69	52	41	35	237	119	79	59	47	40	204	102	68	51	41	33
STUD 76/0.75	371	707	354	236	175	141	113	706	353	206	73	56	332	166	110	69	57	45
STUD 76/1.15											107	83	604	302	162	101	84	66
Wall Height 3300mm																		
STUD 63.5/0.55	103	52	34	26	21	17	89	45	30	22	18	15	78	39	26	20	16	13
STUD 63.5/0.75	219	110	73	55	44	37	187	94	62	47	37	31	163	82	54	43	36	28
STUD 63.5/1.15	454	227	151	112	93	72	388	194	129	81	68	53	340	170	102	64	53	41
STUD 76/0.55	168	84	56	42	34	28	144	72	48	36	29	24	126	63	42	32	25	21
STUD 76/0.75	322	161	107	81	64	54	144	72	48	36	29	24	126	63	42	32	25	21
STUD 76/1.15	632	316	211	194	126	103	537	269	179	117	97	75	468	234	148	92	77	60
Wall Height 3600mm																		
STUD 76/0.55	129	65	43	32	26	22	112	56	37	28	22	19	99	50	33	25	20	17
STUD 76/0.75	271	136	90	68	54	45	233	117	78	73	60	47	205	103	92	57	48	37
STUD 76/1.15	559	280	186	146	112	94	480	240	171	107	89	69	421	211	135	84	70	55
STUD 89/92/0.55	194	97	65	49	39	32	167	84	56	42	33	28	147	74	49	37	29	25
STUD 89/92/0.75	400	200	133	100	80	67	345	173	115	86	69	58	303	152	101	86	61	51
STUD 89/92/1.15	779	390	260	195	156	130	669	335	223	160	133	103	587	294	204	128	106	83
Wall Height 4200mm																		
STUD 76/0.75	176	88	59	44	35	29	155	78	52	39	31	26	139	70	46	35	28	23
STUD 76/1.15	419	210	140	125	84	81	368	184	123	117	97	75	328	164	147	92	76	59
STUD 89/92/0.75	300	150	100	75	60	50	262	131	87	66	52	44	234	117	78	59	47	39
STUD 89/92/1.15	631	316	210	158	126	105	550	275	183	175	145	113	489	245	163	139	114	89

Notes to Table 1:
- Figures relevant to internal load bearing walls only
- Lined Both sides with minimum of 13mm plasterboard or thicker
- Designed to NZS/AS 4600:2005
- Studs at 600mm Centres
- Studs are not spliced

TABLE 4.1: MAXIMUM ALLOWABLE LOAD IN KILOGRAMS PER METER RUN OF SHELF

Rollformers Stud Size and Base Metal Thickness	Permissible Shelf Loadings																	
	Shelf Width 200						Shelf Width 300						Shelf Width 400					
	Number of Equal Spaced Shelves						Number of Equal Spaced Shelves						Number of Equal Spaced Shelves					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Wall Height 4800mm																		
STUD 63.5/0.55	218	109	73	55	44	36	181	91	60	45	36	30	154	77	51	39	31	26
STUD 63.5/0.75	366	183	122	92	73	61	301	151	100	75	60	49	257	129	86	60	50	39
STUD 63.5/1.15	677	339	226	154	128	100	558	279	179	112	93	72	475	238	141	88	73	57
Wall Height 5400mm																		
STUD 89/92/0.75	123	62	41	31	25	21	112	56	37	28	22	19	102	51	34	26	20	17
STUD 89/92/1.15	369	185	123	92	74	62	332	166	111	83	66	55	303	152	101	76	61	51
STUD 150/0.75	433	217	144	108	87	72	388	194	129	97	78	65	352	176	117	88	70	59
STUD 150/1.15	1054	527	351	264	211	176	947	474	316	237	189	158	861	431	287	215	172	144
STUD 150/1.55	1531	766	510	383	306	255	1367	684	456	342	273	228	1236	618	412	309	247	206
Wall Height 6000mm																		
STUD 150/0.75	343	172	114	86	69	57	310	156	103	78	62	52	282	141	94	71	56	47
STUD 150/1.15	912	456	304	228	182	152	825	413	275	206	165	138	755	378	252	189	151	126
STUD 150/1.55	1350	675	450	338	270	225	1215	608	405	304	243	203	1105	563	368	276	221	184

Notes to Table 1:
- Figures relevant to internal load bearing walls only
- Lined Both sides with minimum of 13mm plasterboard or thicker
- Maximum working lateral pressure on wall is 0.25kPa
- Serviceability lateral pressure on wall is at 0.25 kPa
- Maximum Mid Deflection - Height Deflection
- Studs at 600mm Centres
- Studs are not spliced
- Designed to NZS/AS 4600:2005
- Under either shelf pressure loads

TABLE 4.2: MAXIMUM ALLOWABLE LOAD IN KILOGRAMS PER METER RUN OF SHELF

Rollformers Stud Size and Base Metal Thickness	Dimensions				Area	Moment of Area		Section Modulus	
	D	t	Xc	Yc		Ixx	Iyy	Zxx	Zyy
	mm	mm	mm	mm	mm2	mm4	mm3	mm3	mm3
STUD 76/0.55	51	0.55	13.4	25.87	74.04	33833	13547	1308	642
STUD 76/0.75	63	0.55	12.32	31.93	80.64	54388	14591	1703	658
STUD 76/1.15	75	0.55	11.41	37.97	87.24	80748	15477	2127	670
STUD 63.5/0.55	89	0.55	10.51	45.01	94.94	119474	16354	2654	682
STUD 63.5/0.75	92	0.55	10.33	46.52	96.59	128957	16524	2772	684
STUD 76/0.75	89	0.75	10.51	45.01	128.73	161045	21848	3578	911
STUD 76/1.15	92	0.75	10.34	46.52	130.98	173863	22075	3737	914
STUD 63.5/0.55	150	0.75	7.85	75.63	177.96	550798	25195	7344	945
STUD 63.5/0.75	150	1.15	7.89	75.63	270.56	829781	37036	10972	1392

TABLE 4.3: MAXIMUM ALLOWABLE LOAD IN KILOGRAMS PER METER RUN OF SHELF

Stud Size Studs at 600mm Centres with a minimum of one layer of 13mm Plasterboard each side				
Exposure	Low (0.53kPa)	High (0.71kPa)	Low (1.00kPa)	V High (1.30kPa)
63/0.55 Base Metal Thickness	2.55 (3.35)	2.55 (3.05)	2.55 (2.70)	2.50
89/0.55 Base Metal Thickness	4.60	4.25	3.75	3.25
Stud Size Studs at 600mm Centres with a minimum of one layer of 13mm Gib Plasterboard each side				
STUD 63.5/0.75	2.40 (3.35)	2.40 (3.20)	2.40 (2.85)	2.40 (2.60)

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2000 LTD

Established in 1983 by Peter Taylor after 25 years' experience in the design and production of an extensive range of rollformed products.

Rollformers 2000 Ltd began operations in a small suburban factory and rapidly developed into a major supplier of custom rollformed products.

Rollformers 2000 Ltd relocated and currently operates from a purpose built 20,000m2 factory in an industrial estate in Auckland, New Zealand.

The Rollformers Group, where possible, utilises raw materials with a New Zealand content, taking advantage of the high quality and cost competitive materials available from local suppliers.

Rollformers Group is committed to the supply of customised steel products to exacting quality standards, on time and within budget.

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