STRONG STUFF

News from Northpine, makers of Northbeam

December 2022

Using SG10 can help designers

HOW CAN NORTHBEAM SG10 HELP?

CONSIDER SG10

- Use our unique SG8/SG10 Span Tables to calculate what works best for your project www.northpine.co.nz/span-tables
- 3.6m to 7.2m lengths, treated up to H5
- Specify Northbeam on plans
- Bespoke orders via merchants nationwide
- Available within reasonable timeframes

LESS TIMBER VOLUME

- Environmental benefits
- Cost-effective choice
- Saves time and labour

LESS THERMAL BRIDGING

- Achieved by increasing stud and rafter centres
- Insulation is easier to install
- Up to 50% fewer studs required

BETTER CONSTRUCTION R-VALUES (See Back Page for calculation)

- To meet new H1 requirements from May 2023

NEW H1 CODE AND CLIMATE ZONES

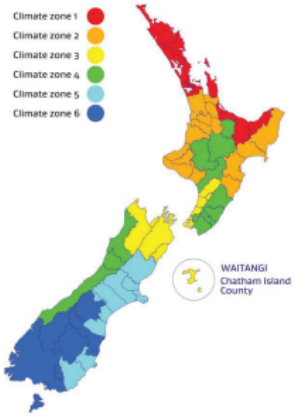
The thermal resistance (R-value) of a 90 x 45 timber member is currently R1. Under the new Building Code rules from May 2023, the least required R-value of a wall is R2.0.

ENERGY EFFICIENCY FOR LARGE BUILDINGS (OVER 300M²) EXCLUDING INDUSTRIAL

Building element	Climate zone					
	1	2	3	4	5	6
Roof	R3.5	R4.0	R5.0	R5.4	R6.0	R7.0
Windows	R0.33		R0.37		R0.40	
Wall	R2.2	R2.4	R2.7	R3.0		R3.2
Underfloor	R2.2			R2.4	R2.5	R2.6

ENERGY EFFICIENCY FOR SMALL BUILDINGS (UNDER 300M²)

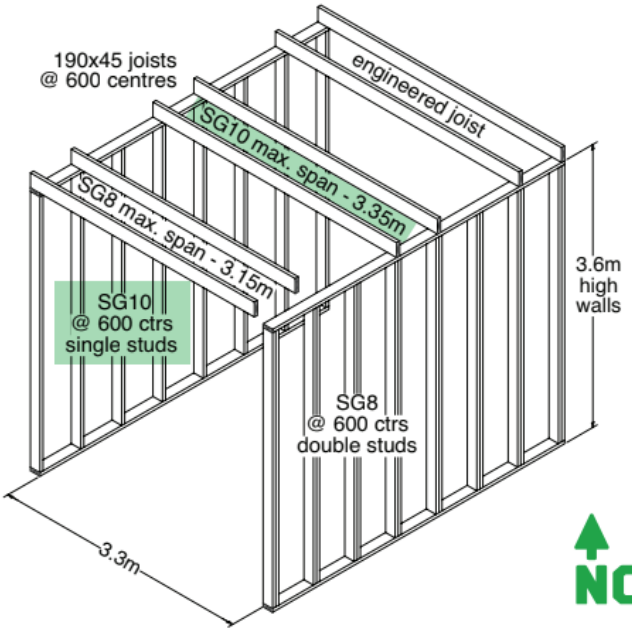
Building element	Climate zone					
	1	2	3	4	5	6
Roof	R6.6					
Windows	R0.37		R0.46		R0.50	
Wall	R2.0			R2.0		
Slab-on-ground floors	R1.5			R1.5	R1.6	R1.7
Other floors	R2.5			R2.8	R3.0	



NORTHBEAM
A product range of Northpine

W: www.northpine.co.nz A: 34 Cove Road, Waipu, Northland P: 0508 432 115 E: sales@northpine.co.nz

JOISTS & STUDS



VALUE EQUATION

If SG8 costs 100%
then SG10 costs 125%
and Engineered timber costs 180%*

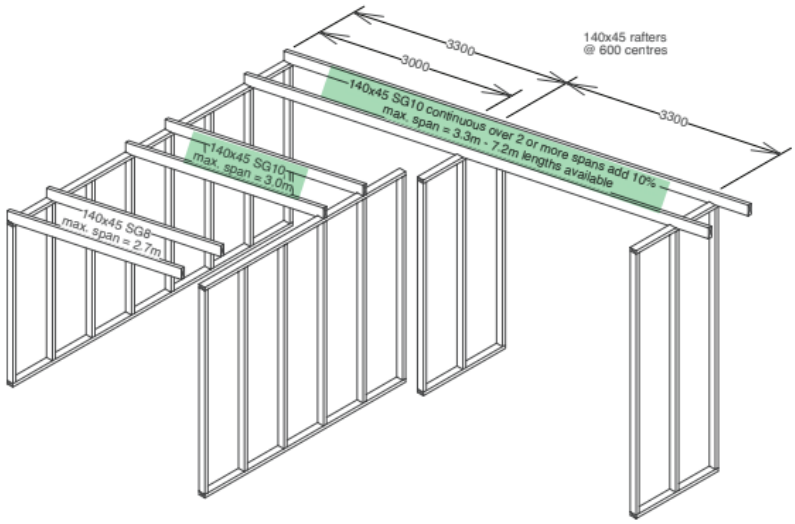
SG10 single stud wall cost about 65% less than SG8 double stud wall and is much lighter to maneouvre on site.

*Indicative only, based on prices current October 2022

NORTHBEAM
A product range of Northpine

BRANZ Appraised
Appraisal No. 5886 [2017]

RAFTERS



VALUE EQUATION

If SG8 costs 100%
then SG10 costs 125%
and Engineered timber costs 180%*

*Indicative only, based on prices current October 2022

CONSTRUCTION R-VALUE CALCULATION

Layer description timber frame wall with insulation between timber framing (45mm x 90mm @ 600 ctrs) - **DOUBLE STUD (SG8)**

External description	Thickness (mm)	Lambda (W/mk)	R-value(m²K/W)
External surface resistance			0.030
Layer 1 - Bevel-backed weatherboard	19	0.125	0.152
Layer 2 - Knauf Insulation between timber framing			1.991
Layer 3 - Plasterboard lining	13	0.21	0.062
Internal surface resistance			0.090
		TOTAL CONSTRUCTION R-VALUE	2.325

CONSTRUCTION R-VALUE CALCULATION

Layer description timber frame wall with insulation between timber framing (45mm x 90mm @ 600 ctrs) - **SINGLE STUD (SG10)**

External description	Thickness (mm)	Lambda (W/mk)	R-value(m²K/W)
External surface resistance			0.030
Layer 1 - Bevel-backed weatherboard	19	0.125	0.152
Layer 2 - Knauf Insulation between timber framing			2.332
Layer 3 - Plasterboard lining	13	0.21	0.062
Internal surface resistance			0.090
		TOTAL CONSTRUCTION R-VALUE	2.666

CONCLUSION: Using SG10 in place of SG8 can increase construction R-values by over 14% in walls.

W: www.northpine.co.nz A: 34 Cove Road, Waipu, Northland P: 0508 432 115 E: sales@northpine.co.nz

NORTHBEAM

A product range of Northpine

Download our handy PDF on the benefits of SG10 and its design requirements.

Download the PDF here

Watch a short 30 second video on Northbeam, a product range from Northpine.

Northland Forestry Awards
Northpine ‘wins big’ via Wilson Family and Troy Wilson

- The Wilson Family - co-winners of Forestry Family of the Year.
- Troy Wilson, Trainee of the Year

Northpine congratulates all nominees and winners at the 2022 Northland Forestry Awards.

An important annual event to recognise the achievers in our industry.

Troy Wilson, Trainee of the Year

They're using Northbeam here

Northbeam SG8 was used for the very stylish accessway/ramp at the new Northland Rugby Union HQ in Whangarei.

Avondale Bridge

Mangonui boardwalk

Watch a short video on the Mangonui Waterfront project.

TIMELY OPPORTUNITY TO TRANSFORM THE INDUSTRY, BUT …

An opinion piece from Northpine general manager BRUCE LARSEN.

Bruce Larsen, Northpine General Manager

The recently released draft Forestry and Wood Processing Industry Transformation Plan (ITP) is a consultative document that proposes a Vision and actions to transform our sector. (Consultation closed 30 September and a final Plan is due to be released late this year.)

The stated aim of this transformation is to maximise the value that the sector generates for New Zealand. Forests are New Zealand's largest renewable resource and are therefore vital in our move toward a more circular, low emissions economy. The sector is already very important to the national economy and our society. In 2021 the industry contributed $6.7 billion in export earnings and employed some 40,000 people.

A major issue for NZ is that over the last decade the volume of logs harvested has doubled, while the capacity for processing timber in NZ has not increased.

Therefore, the key aim for the ITP is for NZ to process more wood on-shore and to use the woody residues to grow the forest-based bio-economy. The ITP suggests that this will require us to upscale and modernise our wood processing capacity and it is envisaged that this can only happen through co-investment from industry and Government.

Suggested goals for the industry transformation include:

- Wood processing to increase by 25% by 2030
- Export earnings from value-added wood products to grow by $600 million by 2040.

To achieve these goals the ITP calls for specific outcomes, including:

- Growing investment to increase manufacturing of advanced wood-based products for building, biotech and fuels.
- Supporting sector co-location, collaboration and sustainability.
- Improving trading and transparency of markets for logs and woody biomass.
- Growing domestic demand for New Zealand's wood products.
- Growing and diversifying export markets.
- Growing and attracting the future workforce.

New technologies are changing what we can produce from woodfibre. Wood can be turned into engineered wood products to build tomorrow's high-rise buildings (the so-called 'mass timber' market), replacing higher emission materials; biofuels can replace coal, it can fuel planes, ships and cars; and advanced biochemicals and bioplastics can produce low carbon materials and chemicals.

Forestry, timber manufacturing and the associated construction and bio-industries certainly seem to be heading towards their day in the sun … or is this just another dream that will fade into history and the humble "4x2" will continue to dominate our building industry?

There are currently any number of obstacles that could trip up this process before we have any chance of ‘transformation’. The suddenly slowing structural timber market over the last few months has brought many wood processors back to earth as demand has evaporated. Confidence has fallen dramatically. Finding staff to operate at our current levels of production is almost impossible, so where will the workforce of the future come from … especially when the timber industry is not generally seen as a ‘desirable occupation’, let alone a career?

Funding expansion is a real challenge for small-medium sized privately-owned wood manufacturing plants. Banks and other traditional lending institutions see the industry as very high risk and will generally make it very difficult to borrow to invest in meaningful or large-scale development. It is incredibly hard to justify borrowing several million dollars when interest rates are relatively high

(because the bank costs in their perceived level of risk), the loan period is only three or four years even though the machinery has an expected lifespan of at least 10-15 years, and depreciation is low.

(Will the Government be offering low-or-no interest loans, for example, to encourage transformational change?

There is a lot of work to be done just to keep the current level of manufacturing operating before we consider what could only be termed an explosion of growth.

Only time and the combined efforts of Government and business will determine how successful this ‘Vision’ will be.