

Axxis<sup>®</sup>

# Steel lets you breathe easy

Steel framing  
for the **Homeowner**





# A healthy home

Axxis® steel has been recognised by the Asthma Foundation of New Zealand as a “sensitive choice”. Our product doesn’t support the growth of mould or rot, and the stability of steel protects against cracked linings and cladding. It doesn’t emit gases or other vapours.





# A better quality home

We all want healthy houses that last. By framing your house with Axxis® steel you'll be creating a strong, healthy home that stands the test of time.

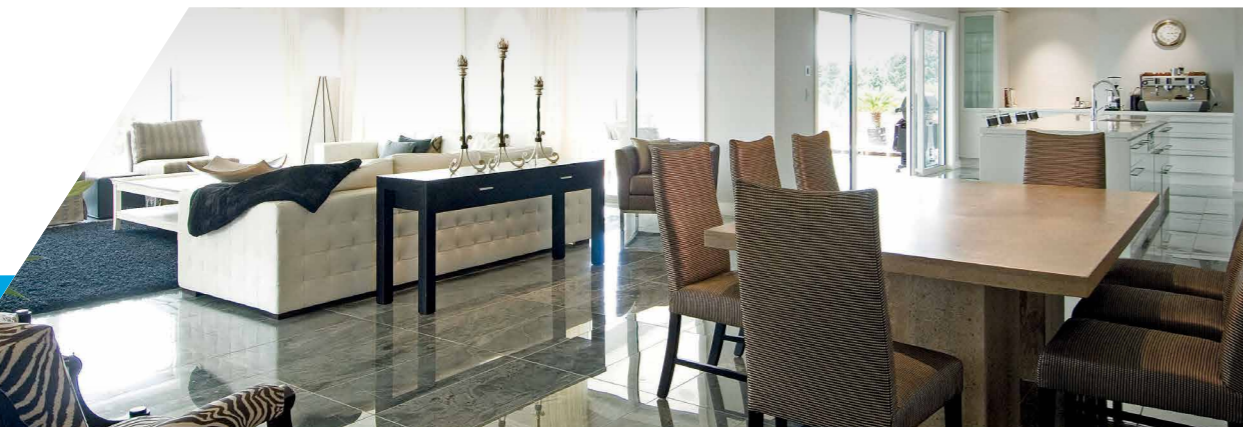
## BUILT TO LAST

A house framed with Axxis® steel is strong, straight and built to last. Made by New Zealand Steel, Axxis® steel is designed for New Zealand houses and made from galvanised, high tensile steel.

Steel is solid and reliable, and doesn't twist or warp as a result of moisture. A house framed with Axxis® steel helps ensure plumb walls, square corners and flush surfaces for its entire life.

## THE STRENGTH OF STEEL

Axxis® steel won't support the spread of fire and has outstanding earthquake resistance. Axxis® steel won't rot or support mould growth, and it won't suffer from borer or other insects. It's galvanised to protect against corrosion in a well-constructed house.





# Peace of mind

Our 50-year Durability Statement: Axxis® steel has been developed and tested by New Zealand Steel, for New Zealand houses. Perfectly suited to New Zealand's conditions, this steel is galvanised with a zinc coating for protection. We're so confident in our product we offer a 50-year durability statement. You can trust that Axxis® steel will stand the test of time.

## VERSATILITY OF DESIGN

Steel framing opens up a wide range of design opportunities. Steel framing is strong and light, giving it excellent spanning capability and affording more design freedom to cost-effectively create wide, open spaces.

## 100% RECYCLABLE STEEL

Axxis® steel is manufactured in New Zealand from local west coast ironsand, with a component of recycled steel. Steel frames are made with minimal wastage and can be recycled again and again without losing strength.

## VALUE FOR MONEY

When you build with Axxis® steel you're using a top quality product. Combined with the rollforming technology behind steel framing, Axxis® steel provides the bones for a straight, strong and stable house. Framing made with Axxis® steel is a comprehensive system that is cost-competitive with timber framing.





# More reasons you can count on Axxis® steel

Using Axxis® steel in your house is a move that you can be confident in for years to come. Hundreds of homes across New Zealand are built with steel framing, and every house framed with Axxis® steel has the backing of New Zealand Steel.

## NEW ZEALAND STEEL: A COMPANY YOU CAN TRUST

Axxis® steel is manufactured by New Zealand Steel, the company behind COLORSTEEL®. For decades, thousands of Kiwis have chosen New Zealand Steel for their roofing needs, and COLORSTEEL® has become one of this country's favourite and most trusted roofing brands.

## EXTENSIVELY USED IN NEW ZEALAND

Hundreds of homes in New Zealand are built every year on a frame made of steel. It has become a common way to build, with steel framing in New Zealand going right back to the 1960s.

## USED BY THE BEST

Steel framing is used by independent builders for one-off architectural designs as well as homes by nationwide builders like Golden Homes.

## MADE IN NEW ZEALAND

Axxis® steel is manufactured right here in New Zealand, by New Zealand Steel at Glenbrook, just south of Auckland. It is made using locally sourced ironsand.

# Frequently Asked Questions about Axxis® steel:

We understand you might have some questions about the Axxis® steel product. Most of those should be covered here, but more information can also be found at [www.axxis.co.nz](http://www.axxis.co.nz)

## DOES A HOME BUILT WITH AXXIS® STEEL LOOK ANY DIFFERENT?

No, there is no difference in the finished look of a home that has a steel frame. Steel frames are compatible with concrete slabs and other sub-floor construction, as well as any type of wall, ceiling and roof materials. Steel has a very high strength-to-weight ratio, making it excellent for spanning and providing more freedom to design and create wide, open living spaces.

## CAN I CONVERT MY PLAN FROM TIMBER TO STEEL?

Even if your house plans are already drawn up to include timber framing, it's a small change to switch to steel. You'll be surprised at how competitively priced the steel option is, especially considering the benefits that come with an Axxis® steel framed house.

## CAN I EXTEND OR CHANGE MY HOME AT A LATER DATE?

As strong and immovable as a steel frame is, it's still relatively easy to make alterations and additions to a steel framed house. What's more, with the versatility and strength of steel, lining up new alterations and additions will be easy.

## HOW ENVIRONMENTALLY FRIENDLY IS AXXIS® STEEL?

Axxis® steel is manufactured in New Zealand from locally sourced ironsand and a component of recycled steel. The rollforming technology behind steel framing means the product is fabricated to the exact specifications of each home, which means minimal cutting, wastage and less environmental impact. Axxis® steel doesn't emit gases or vapours and steel is 100% recyclable.

## IS IT ELECTRICALLY SAFE?

It couldn't be safer. Standard practice is to earth steel frames, so even if they are exposed to a live wire the earthing trips the residual current safety switch to reduce the chance of electrocution. In fact a steel frame offers better protection in a lightning storm than any other, as any charge to hit the frame will be redirected to the ground, reducing the likelihood of fire or injury.

## HOW DO I HANG PICTURES OR OTHER WALL MOUNTED OBJECTS?

Just like timber framed walls, lightweight pictures can be hung from adhesive hooks or on nails. Heavier pictures should be hung with screws or specialist nails to a steel stud.





# Interested in building with steel?

Building your house using Axxis® steel enables a strong healthy home finished to the highest possible standard. Whether you want an architecturally designed home, or a design-and-build, there are quality builders and designers around the country who can make your dream come true using Axxis® steel.

## HOW TO FIND A BUILDING PROFESSIONAL TO DESIGN OR BUILD WITH AXXIS® STEEL

To find a building professional who works with steel framing please visit [www.axxis.co.nz](http://www.axxis.co.nz)  
There you'll find a full list of contacts including Registered Master Builders, Certified Builders, architects and designers. The geographical search tool will help you find the nearest professional for you.  
If you've already got a builder, architect or designer but they don't have previous steel framing experience, the fabricators listed at [www.axxis.co.nz](http://www.axxis.co.nz) will be able to walk them through the process and display just how simple Axxis® steel is to work with.

New Zealand Steel is the manufacturer of AXXIS® steel. Rollforming and fabrication is undertaken by independent specialist steel frame and truss fabricators. New Zealand Steel is not responsible or liable for rollforming, fabrication or subsequent installation.  
Buyers and users of New Zealand Steel products and services must make their own assessment of the products for their specific project conditions. All queries regarding product specification, purpose or application should be directed to New Zealand Steel, phone +64 9-375-8999.  
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# Selecting a fabricator

Find your local steel frame and truss fabricator at [www.axxis.co.nz](http://www.axxis.co.nz)

To decide which fabricator is right for you, talk to them about:  
> the steel framing system they use. Every system has its own subtle differences  
> their geographic coverage relative to where you are building  
> whether they supply only, or if they can erect frames and trusses for you  
> the support they provide, for example on-site training  
> references from other builders they have worked with  
We recommend using fabricators who are members of the National Association of Steel Framed Housing (NASH).

## NEW ZEALAND STEEL LIMITED IS THE MANUFACTURER OF AXXIS® STEEL.

Steel for framing, rollforming and fabrication is undertaken by independent specialist steel frame and truss fabricators. New Zealand Steel is not responsible or liable for that rollforming, fabrication or subsequent installation. This brochure is not intended to be used as technical evidence for the use of Axxis® steel.  
Steel for framing technical advice should primarily be obtained from your frame and truss fabricator with additional advice, including compatibility of materials, available in the New Zealand Steel Durability Statement. The information contained in this brochure is current as at May 2015 and is based on data available to New Zealand Steel Limited at the time of going to print. This publication replaces all previous Axxis® steel builder brochures.

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# Answering your questions

If you haven't yet worked with steel frames, you probably have some questions. Here we explain some of the more commonly asked questions, but for any further information visit [www.axxis.co.nz](http://www.axxis.co.nz)

## WILL MY SUB-TRADES BE HAPPY

### WORKING WITH IT?

Steel framing is easy to work with. After building two or three steel framed houses, most builders and sub-trades are sold on the product. Frames come pre-punched with service holes, and creating new service holes is simple.

## CAN A HOUSE PLAN BE CONVERTED FROM TIMBER TO STEEL?

Even if house plans are already drawn up, it's easy to switch from timber to steel. You'll be surprised at just how competitively priced steel is, especially considering the obvious benefits of a steel framed house.

## DO I (OR MY SUB-TRADES) HAVE TO ERECT THE FRAME MYSELF?

Axxis® steel fabricators are happy to provide advice and support for builders, and most even offer a service to supply and stand the frames.

## WILL THERE BE ANY ISSUES GETTING

### A BUILDING CONSENT?

Building Consent Authorities are becoming increasingly familiar with approving plans for steel framed homes. Your fabricator will supply fully-engineered detail drawings for your consent application. To ensure things go smoothly the National Association of Steel Framed Housing (NASFH) provides support and training for building officials.

## HOW ARE CLADDING AND LININGS FIXED?

Steel framing enables you to apply exactly the same interior and exterior finishes as with timber framed houses. Gypsum board linings are glued and screwed to the frame. Thermal breaks are fixed to the exterior face of frames before building wrap is applied and cladding fixed.

## WHEN THE WEATHER CHANGES, DOES STEEL CONTRACT AND EXPAND LIKE TIMBER?

Steel framing is a relatively stable product, with a coefficient of linear expansion of 12 x 10<sup>-6</sup> per degree Celsius, which equates to just 0.012mm per linear metre of expansion for every degree Celsius change in temperature. Steel does not absorb moisture, so no dimensional change occurs as a result of variations in moisture levels.

## IF AXXIS® STEEL IS CUT OR DRILLED,

### WILL IT RUST?

Axxis® steel is made from galvanised steel. A zinc coating provides protection against corrosion through cut edges. New Zealand Steel provides a 50-year durability statement to meet the requirements of NZBC Clause B2 – Durability for houses built within specification.

## HOW EASY IS IT FOR ME TO FIT THE

### FRAMES MYSELF?

Very, very easy. Suppliers can deliver the frames preassembled, and clearly marked for assembly with the type, positioning and number of all fixings clearly labeled.

## IS STEEL SLOWER OR FASTER TO

### WORK WITH?

Steel can be more time effective to work with than timber. Frames and trusses are supplied preassembled and ready to erect, and some fabricators can even provide a supply and installation service. Steel frames are light and easy to move, having just one third the weight of timber. Erecting a steel frame is also less weather dependent than timber. Builders report less downtime from call-backs.

## WILL IT BE DIFFICULT TO CREATE SERVICE HOLES FOR PIPES, WIRES AND OTHER SERVICES?

Axxis® steel is sub-trade friendly. Service holes are pre-punched and have plastic grommets to protect cable sheathing. Additional service holes are easy to drill or can be made cleanly with a stud punch.

## HOW SHOULD I FIX INTERIOR LININGS?

Wall-linings are screw-fixed in accordance with Bulletin ND-07 provides guidelines on fixing wall and ceiling linings (see [www.nashnz.org.nz](http://www.nashnz.org.nz)). Axxis® steel has a similar expansion coefficient to gypsum plasterboard, which means minimal cracking. It's already common practice to fix ceiling linings to steel ceiling battens.

## IS IT ELECTRICALLY SAFE?

Very. Standard practice is to earth steel frames, so even a live-wire exposure will simply short out and trip the residual current safety switch to minimise electrocution risks. In a lightning storm, the earthing in steel framing redirects the current into the ground.

## WHAT TOOLS DO I NEED?

Steel framing requires very few specialist tools. No welding equipment is required. To make things easy you'll require a good quality set of aviation snips (left cut – red handle, right cut – green handle, straight cut – yellow handle), a cordless impact driver with a selection of bits including 150mm bits for screwing into deep corners, and a 34mm hole saw to make any additional service holes. Alternatively a 34mm stud punch can be used to cleanly create service holes without sharp edges or warf.

## WHERE DO I SOURCE FRAMES AND TRUSSES MADE WITH AXXIS® STEEL?

Whether you build architecturally designed homes or build your next home with a steel frame. To find steel frame and truss fabricators in your area simply visit [www.axxis.co.nz](http://www.axxis.co.nz). Further information is also available at [www.nashnz.org.nz](http://www.nashnz.org.nz).







# Even more reasons to make the change

## SPEED OF CONSTRUCTION

Working with Axxis® steel is very fast and easy. Most steel framing fabricators can both supply and erect the frame for you, but if you want to erect it yourself you'll find the process very straightforward. Fabricators usually supply frames preassembled. Frames are clearly marked. No welding is required. The frames come with pre-punched service holes and plastic grommets to make it easy for sub-contractors to work with. Best of all, steel doesn't absorb moisture, so there's no time wasted waiting for frames to dry.

## A SUPERIOR FINISH

The rollforming technology behind steel framing allows for a high degree of dimensional accuracy, which enables consistently straight walls, square corners and a high quality finish. The precision of steel framing makes it easy for contractors to fit internal linings, kitchens and cupboards. Axxis® steel stays straight for its entire life, and doesn't suffer from contraction or expansion through changes in moisture. Steel frames don't warp, twist, sag or shrink, eliminating many of the maintenance issues that create builder call-backs.

## HEALTHY AND SAFE

A steel frame is lightweight and easy to handle (approximately one-third the weight of a timber frame). Steel also has none of the additional preservative chemicals associated with timber, which makes a real difference to the health of builders and tradesmen working with the product. It's electrically safe and fire resistant, and a healthy option for homeowners as steel won't support the growth of mould or rot.





# More reasons to make the change

With obvious design and quality advantages, the benefits of building with Axxis® steel cannot be ignored.

## HOMEOWNER APPEAL

Customers love steel framing. It isn't just because of the high quality finish of Axxis® steel, but also because steel framed houses are healthy for people and the environment. Frames made from Axxis® steel remain sturdy and true for years to come, lowering the risk of problems associated with frame movement. This means less builder call-backs and a home that looks as good as the day it was finished.

## PEACE OF MIND: A 50-YEAR DURABILITY STATEMENT

Axxis® steel is a product tested by New Zealand Steel, for New Zealand conditions and houses. Galvanised with a zinc coating for protection, every frame is backed by a 50-year durability statement.

New Zealand Steel is a company you can trust, having already developed the extremely popular COLORSTEEL® brand for roofing and cladding. COLORSTEEL® prepainted steel is one of New Zealand's favourite and most trusted brands. New Zealand made Axxis® steel is manufactured at Glenbrook by New Zealand Steel, and is made using local iron sand.

## COST COMPETITIVE

Although the frame of a house usually represents just 10% of the total house cost, the quality of the frame plays a major role in the finished appearance and durability of the house. Every length of Axxis® steel is straight, stable and strong. Axxis® steel is a top quality product that comes at a price competitive with timber frames.

## DESIGN FLEXIBILITY

Steel framing opens up a variety of design possibilities. Steel's high strength-to-weight ratio gives it excellent spanning capability, providing you with more design freedom to cost-effectively create wide open spaces.

## 100% RECYCLABLE STEEL

Axxis® steel is made with the environment in mind. Our steel is manufactured right here in New Zealand from locally sourced west coast iron sand, along with a component of environmentally-friendly recycled steel. It's also pre-manufactured, so there's minimal wastage from cutting, reducing the environmental impact from building site waste. Steel is also 100% recyclable, and doesn't lose any of its properties with continual recycling.







# Better for you and your business.

New Zealand Steel produces Axxis® steel, a galvanised, high-tensile steel specifically designed for the New Zealand housing market. All the time more builders are making the switch to steel framing, and finding that working with Axxis® steel is good for business and good for the health of builders and homeowners. Steel enables the highest quality finish, every time.







Steel framing  
for the Builder

Steel is on  
the level

AXXIS<sup>®</sup>