



**Judah**<sup>®</sup>  
A VISION IS BORN

Your perfect partners for

 **sustainable future...**

JUDAH  
**QUIET STUD**<sup>®</sup>



PRODUCT & SERVICE  
**CATALOGUE**

## ABOUT US

Judah offering a wide range of light gauge roll formed steel products and systems. We have successfully positioned and established our industry leading products in a number of global markets over the past 60 years through the construction industry. Our highly experienced advisory team of engineers and experts with specialized expertise in wall and ceiling solutions has led us to successfully provide solutions for many of the best buildings around the world. We here at Judah are focused on providing high quality products and outstanding customer service that equip our customers with the ability to save on labor costs through improved installation efficiency, short lead times, and innovative building solutions. We want you to know that we've rallied the best, most experienced experts at Judah together in the making of this book so that we can offer professionals like yourself a detailed technical reference to use.

### OUR VISION

Our vision is to become the preferred supplier of innovative wall & ceiling solutions

### OUR MISSION

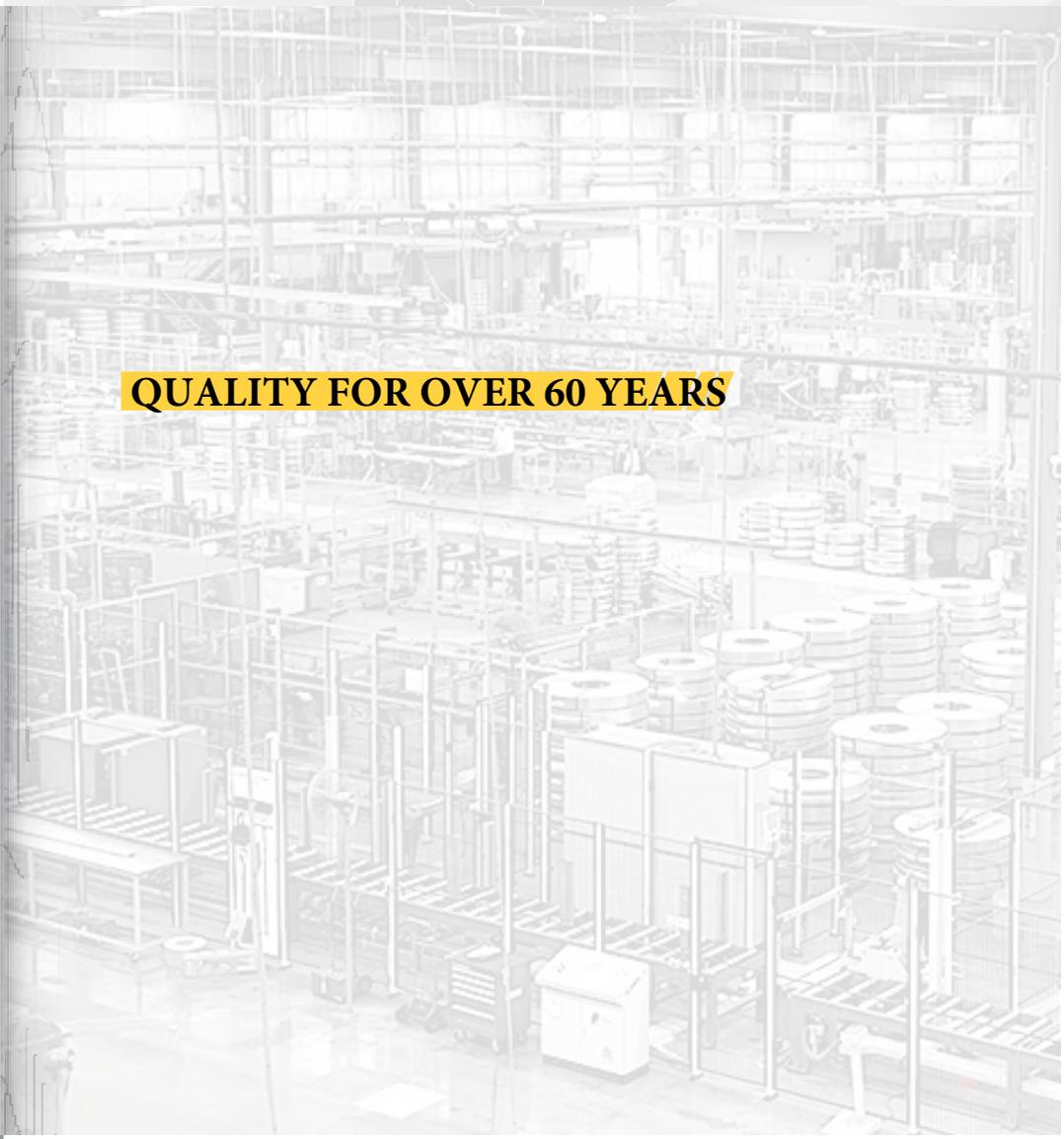
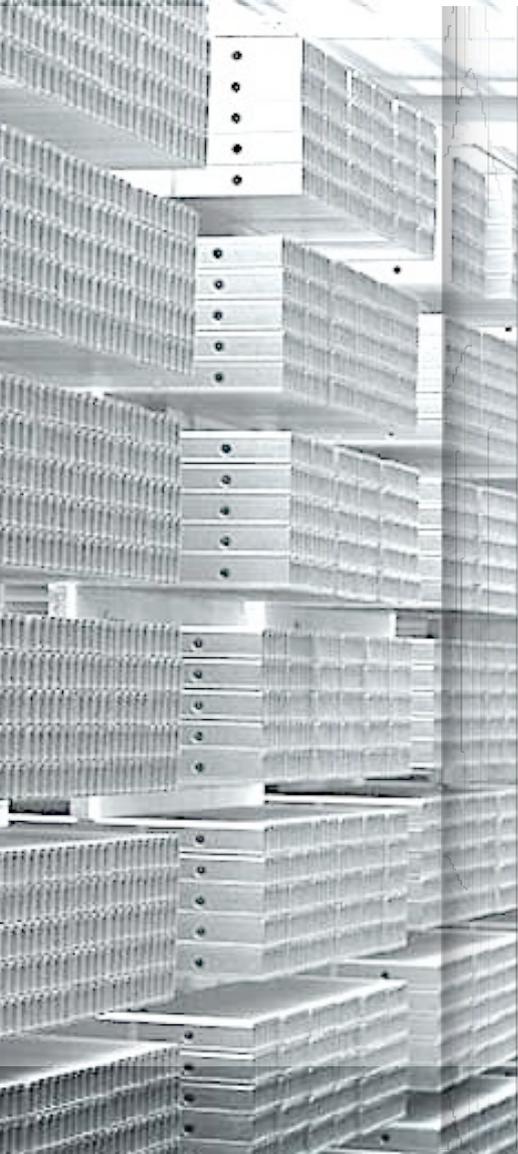
Our mission is to lead the market trend through smart, sustainable and certified drywall solutions to fulfill the customer's needs.

## QUALITY MILESTONES





# MAP OF OUR SUCCESS



**QUALITY FOR OVER 60 YEARS**

# OUR SERVICES

Our team provides specialized wall and ceiling solutions with flexibility and resources to ensure customer satisfaction that matches project specifications. We accommodate special orders with comprehensive engineering and logistical support. With a well-qualified team, we service various market sectors including residential, commercial, hotel, educational institutions, and healthcare facilities.

We are an innovative products and services provider offering customized wall systems from the studs to the paint. We work diligently to partner with our clients around a common goal to bring their vision to life. With Judah a vision is born.

## “System Solutions Provider for all Market Sectors”

Our vast production capacity ensures that we serve the following market sectors:

### *Educational Institutions*



### *Luxury Hotels*



### *Airport & Terminals*



### *Commercial Buildings*



### *Residential*



### *Cinemas*



### *Hospitals*

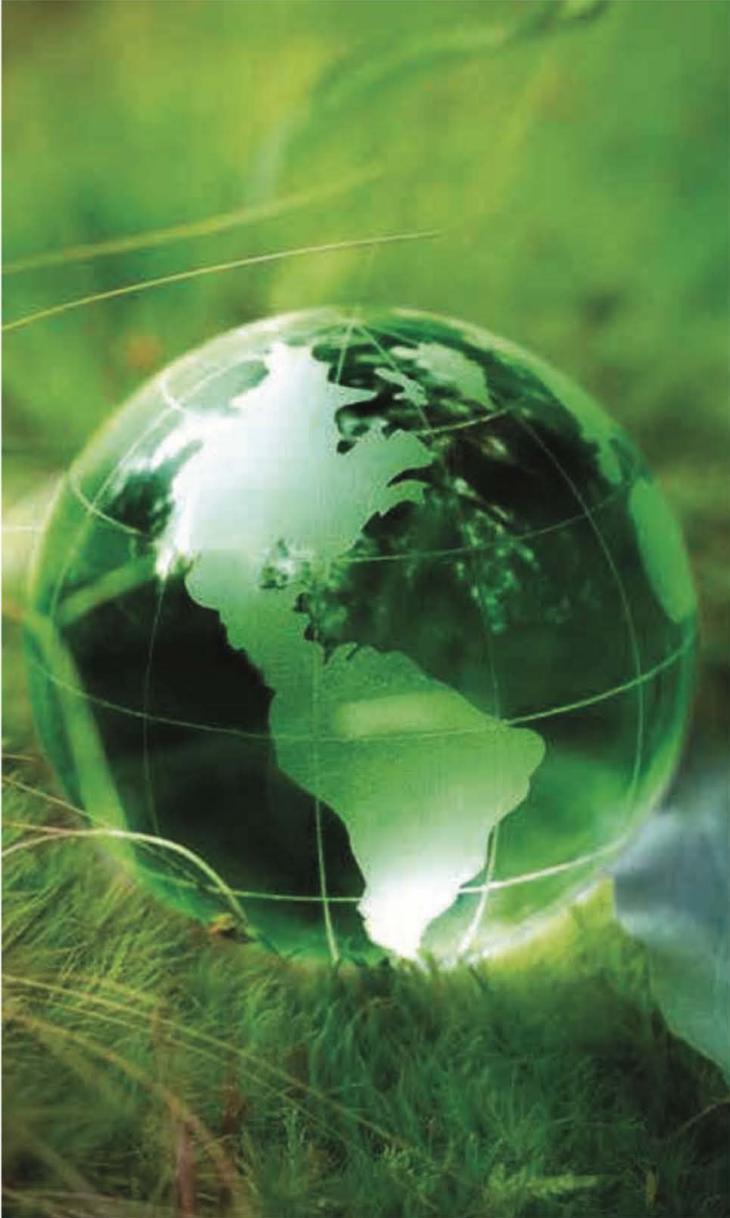


### *Luxury Villa Projects*



### *Shopping Centers*





# ◀ Sustainability

Our aim is that the manufacturing and use of our products do not negatively impact the environment while building sustainable and health-conscious living and working spaces.

In order to provide sustainable construction solutions , we:

- Continually develop product and service methods to improve the environment
- Provide tailor made solutions to end the user.
- Recycling product waste from construction phases
- Maintain compliance with health, safety and environmental rules and regulations

We maintain a long-standing commitment to our employees, customers, and communities to reduce our impact on the environment.

## OUR ◀ QUALITY

We are committed to providing solutions to the construction industry, which exceed our customer's expectations. We ensure that 'Quality' is the focus of all our activities.

### Quality Policy

We aim to manufacture and supply steel profiles to the construction industry that exceed the customer's expectations for high quality, features and associated benefits, safety, customer service and added value. We are committed to providing the above by utilizing.

- The latest technology and manufacturing.
- Advanced knowledge of our products and systems.
- Compliance with the relevant International Standards, specifications and business practices.

Judah® as market leader introduce the best value-added products and services to the construction industry.

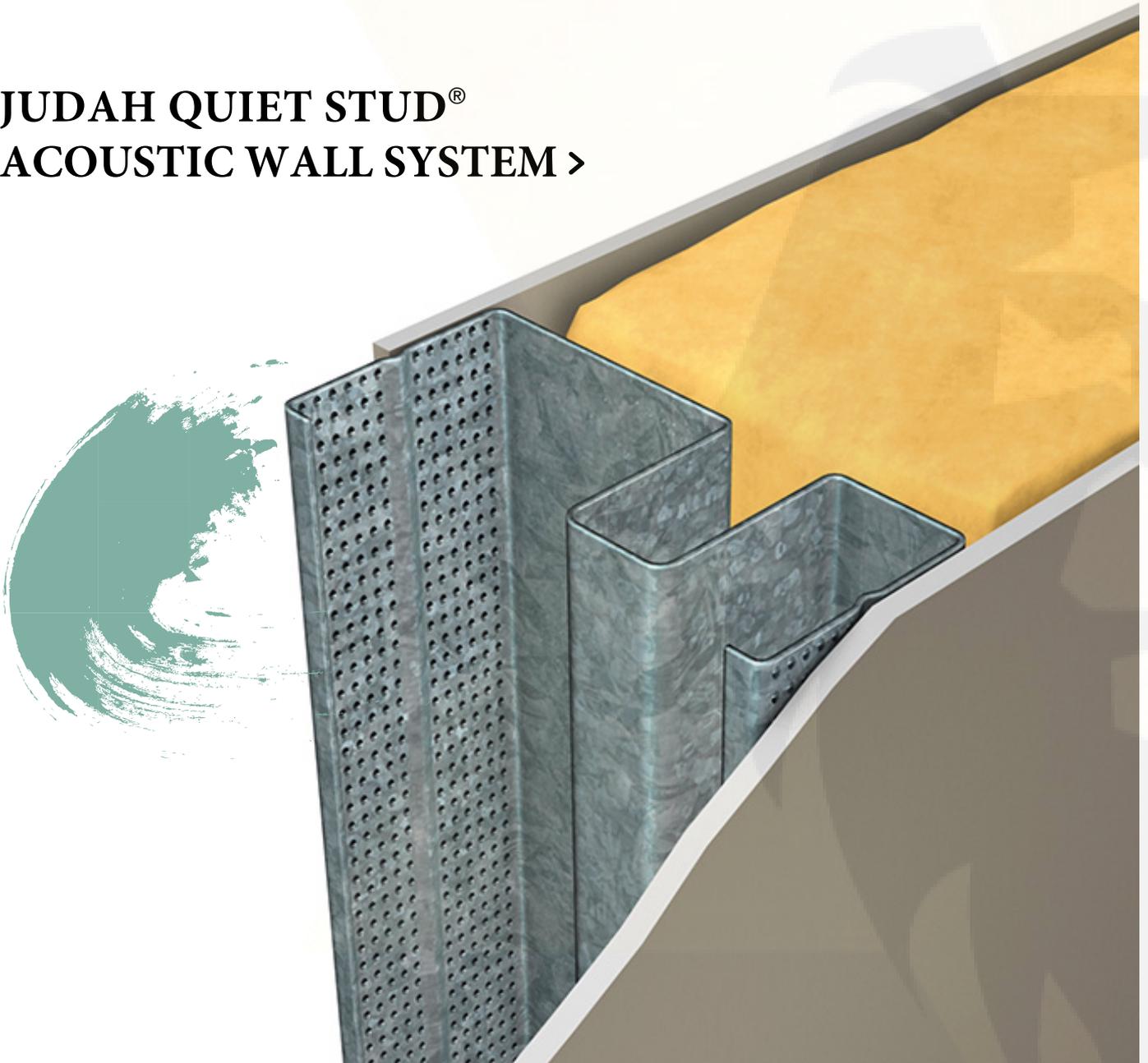




**Judah Steel**

A VISION IS BORN

**JUDAH QUIET STUD®  
ACOUSTIC WALL SYSTEM >**



# JUDAH QUIET STUD® ACOUSTIC STUD SYSTEM

## SUMMARY

Judah QUIET STUD is a major breakthrough in acoustic control. Its unique design, combined with appropriate lining board systems, forms an effective buffer against unwanted noise and a cost-effective solution to American's acoustic control provisions.

Fast and simple to install, it leaves more usable floor space in a similar footprint and is almost exactly the same as standard drywall construction, resulting in lower installation costs and virtual fail-safe acoustic wall system.

## SUITABLE FOR:

- Acoustic control provisions
- Acoustic wall system
- Non-Fire Rated Systems
- Fire Rated Systems
- Inter-tenancy walls

## SPECIAL FEATURES

- Achieves superior performance in a smaller footprint, leaving more floor space
- Quick installation as it is virtually the same as standard drywall construction, resulting in lower labour costs
- Single profile; no need for staggered stud method of installation
- Utilises standard Judah 92mm top and bottom wall tracks
- Bell-mouthed service holes for electrical cabling
- Studs are designed for a friction fit into top & bottom wall track
- Manufactured with a minimum coating of Z275

## IN PRACTICE

The Judah QUIET STUD system has been used in a range of projects, including apartments, hotel refurbishments, schools, universities, hospitals and offices. At the *District Law Court in Western Australia*, Judah QUIET STUD was used as an effective buffer against unwanted noise between court rooms and at the recent *Clyde Quay Wharf Apartments in New Zealand*, between the inter-tenancy walls.

## IMPORTANT NOTE:

Judah recommends its products and systems are installed by a qualified tradesperson and according to the relevant codes and standards outlined on page [256](#) of the main manual.

## CONTENTS:

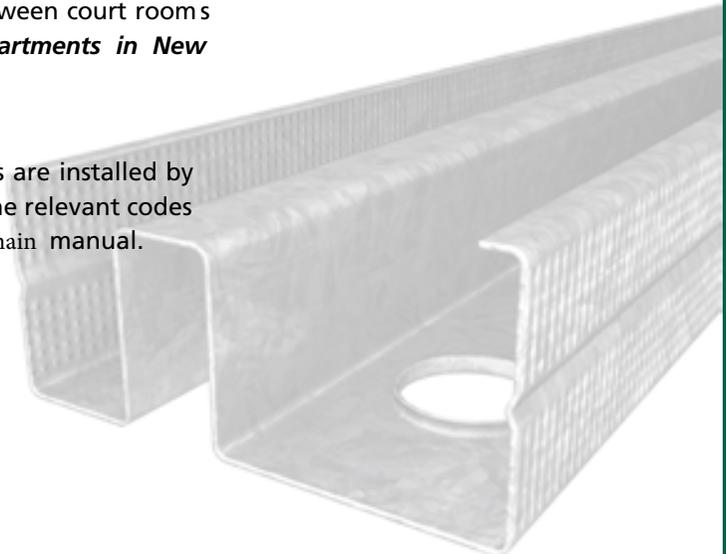
COMPONENTS [150](#)

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# QUIET STUD® COMPONENTS

### QUIET STUD

RQST	3 5/8" x 2" x 22 GA
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### WALL TRACK

250	3 5/8" x 1" x 25 GA with hem
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### DEFLECTION HEAD TRACK

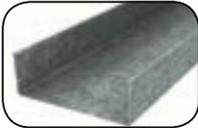
499	3 5/8" x 2" x 20 GA Deflection Head Track
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### QUIET STUD



RQST

### WALL TRACK



250

### DEFLECTION HEAD TRACK



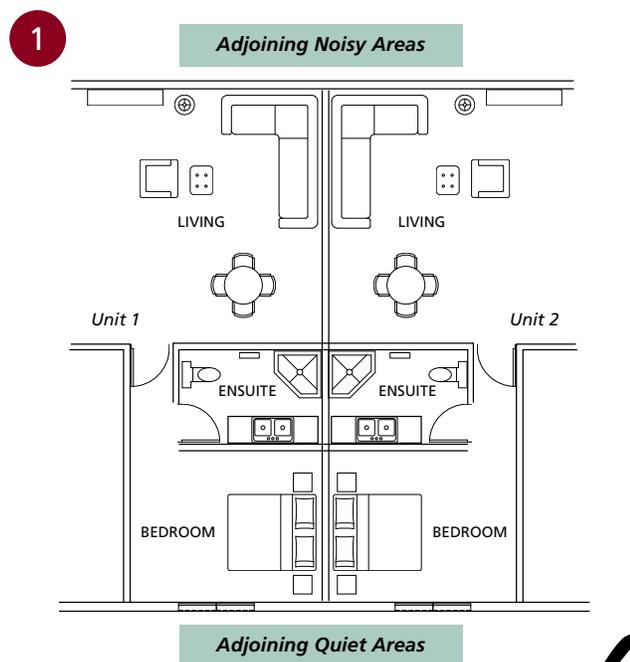
499

# SOUND ISOLATION DESIGN FOR WALLS

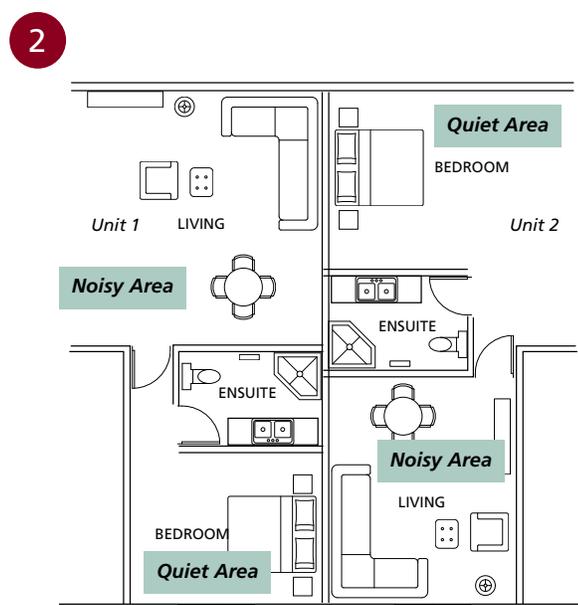
Good acoustic control begins with good acoustic design.

In the case of adjoining dwellings that have a common inter-tenancy wall, noise intrusion can be limited by considering a range of factors including:

- Plan quiet areas in one unit adjacent to quiet areas in the adjoining unit.
- Plan quiet areas that are not immediately adjacent to plumbing, sanitary services or similar.
- Design walls to be full-height, to underside of soffit or roof above.
- Use high quality acoustic-grade insulation in the wall cavity.
- Use high quality, durable acoustic sealant at wall, floor or ceiling intersections and around penetrations.
- Minimise penetrations in sound-rated walls and ensure that power outlets and light switches are not installed back-to-back.
- Minimise the incidents of other flanking paths (ie; doors next to other doors etc).
- Use quieter pipe constructions to reduce noise generated by pipes and other services.
- Use Judah QUIET STUD®



■ EXAMPLE OF GOOD ACOUSTIC DESIGN PRACTICE



■ EXAMPLE OF BAD ACOUSTIC DESIGN PRACTICE

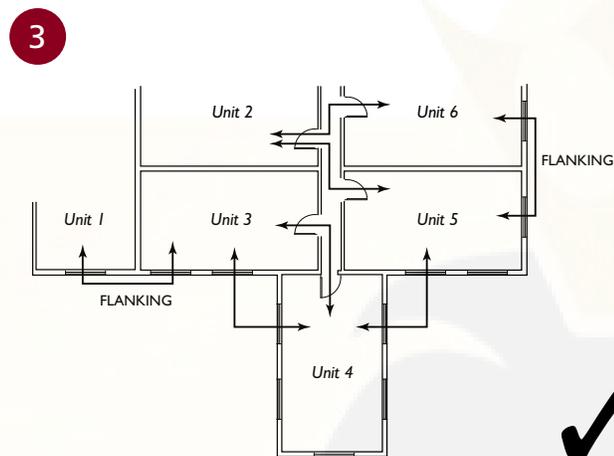
## SOUND ISOLATION DESIGN FOR WALLS (continued)

Good acoustic design practice takes into account the noise generated in a building space and ensures that, where possible, like areas in adjacent units are designed and constructed back-to-back (refer Figure 1).

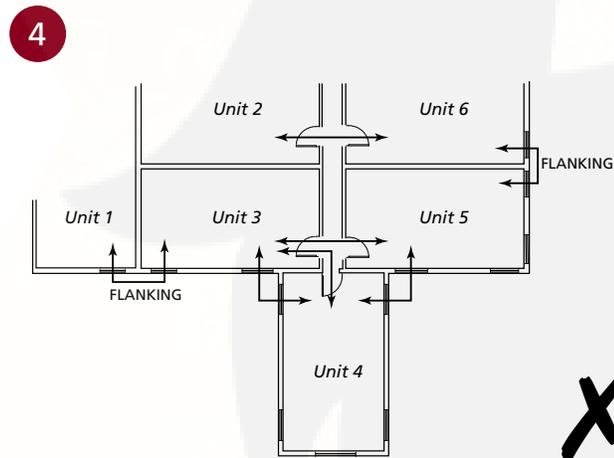
Noisy areas should be grouped together and sharing common walls where possible, i.e. wet areas, toilets, etc. in adjacent units should be designed and constructed back-to-back. This can also assist with reducing the ultimate construction cost of the building.

Another good acoustic design practice is to maximise the distance between access doors or external windows of adjoining units. This will limit potential flanking paths.

There are many other design issues that need to be taken into consideration to ensure good acoustic performance in walls and ceilings, including design of penetrations, plumbing and waste pipe services, hydraulic and mechanical services, acoustic sealants, door and window openings to name just a few. Judah recommends that the user examine various publications such as those provided by the leading plasterboard manufacturers as well as the ABCB Sound Insulation 2004 Guideline available from the Australian Building Codes Board.



■ EXAMPLE OF GOOD ACOUSTIC DESIGN PRACTICE TO MINIMISE FLANKING PATHS



■ EXAMPLE OF BAD ACOUSTIC DESIGN PRACTICE AS FLANKING PATHS ARE DIRECTLY ADJACENT TO ONE ANOTHER

# SOUND ISOLATION PROVISIONS

## BUILDING CLASSES

Way back in 2004 the Building Code was amended in response to mounting evidence that the existing sound insulation code was not meeting community expectations.

The purpose of these amendments was to reduce noise transmission between attached dwellings (high-rise and multi residential apartments etc) and between dwellings and units and other areas within a building such as common amenities, corridors and stairwells.

Table 1 refers to the classes of building covered by these amendments as categorised by the BCA.

## PROVISIONS

The BCA deals only with sound insulation between dwellings and does not address issues such as external noises or noise transfer from within a unit to outside of the building.

The provisions deal with both wall & floor/ceiling requirements but it is only wall requirements that we are concerned with in this specific document.

To meet the new code requirements, manufacturers have three basic ways to satisfy the IBC sound insulation requirements:

- *Prescriptive Approach* – Laboratory Tested Systems
- *Performance Approach* – Conduct a Field Test specified in the Verification Method of the BCA and IBC
- *Performance Approach* – Use Expert Judgement or Opinion that the systems meet Deemed-to-Satisfy levels.

The current BCA and IBC minimum requirements for sound insulation are as shown in Table 2.

**TABLE 1: BUILDING CLASSES**

<b>CLASS 1*</b>	One or more attached dwellings separated by a fire-resisting wall (ie; terrace, villa, row house etc) or a small boarding house, guest house, hostel or similar less than 300m <sup>2</sup> and one which more than 12 persons would not ordinarily be resident.
<b>CLASS 2</b>	A building containing two or more sole-occupancy units each being a separate dwelling (ie; flats, apartments, units etc).
<b>CLASS 3</b>	A residential building other than Class 1 or 2 such as large boarding house, back-packers accommodation, residential part of a hotel/school/detention centre or health-care building etc.
<b>CLASS 9C</b>	Aged care building.

*NOTE: \* The BCA sound insulation provisions Volume One, Part F5 only apply to Building Classes 2, 3 & 9c. The provisions of Volume Two, Parts 2.4 & 3.8.6 apply to Class 1 buildings. Refer to the BCA for exact definitions.*

**TABLE 2: SOUND INSULATION PROVISIONS OF THE BCA**

CLASS	WALLS SEPARATING	R <sub>w</sub> & C <sub>tr</sub>	R <sub>w</sub>	DISCONTINUOUS CONSTRUCTION
<b>1</b>	Habitable rooms (other than kitchens) of one building from a bathroom, laundry, kitchen, etc in another Class 1 building	50	–	Yes
	Rooms between Class 1 buildings other than above	50	–	No
<b>2&amp;3</b>	Habitable rooms (other than kitchens) of one SOU from a bathroom, laundry, kitchen etc in another SOU	50	–	Yes
	Rooms between SOU's other than above	50		No
	SOU's from public corridor, stairway etc	–	50	No
	SOU's from plant room or lift shaft	–	50	Yes
<b>9C</b>	SOU's from a kitchen or laundry	–	45	Yes
	SOU's from other SOU's (other than above), or from a sanitary compartment, bathroom, plant room etc.	–	45	No

*NOTE: SOU = Sole-occupancy Unit*

# SOUND ISOLATION PROVISIONS (continued)

## Definitions

### IMPACT NOISE

At the same time as sound insulation requirements were modified, the BCA and IBC also made changes to the provisions dealing with impact noise.

Impact noise occurs in adjoining tenancies and occurs on the floor or wall of that tenancy. In the case of walls, a typical source of impact is the slamming of doors on cupboards mounted on the common wall between tenancies.

The amendments also try and deal with audible noise which is generated by vibrations in the structure (structure-borne noise) which could come from mechanical equipment or vibrations from plumbing services or similar.

To deal with this particular issue of impact noise the BCA added further detail in relation to walls which separate:

- (a) a bathroom, sanitary compartment, laundry or kitchen in one SOU from a habitable room (other than a kitchen) in an adjoining unit; or
- (b) a SOU from a plant room or lift shaft.

The Clause states that a wall in a building required to have an impact sound insulation rating must-

- (i) for a Class 2 or 3 building be of discontinuous construction; and
- (ii) for a Class 9c aged care building, must-
  - (a) for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or
  - (b) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with... (*various specifications referred to further in the BCA*).

### IMPORTANT:

As potentially alterations to these provisions can be made from year to year reference should always be made to the current BCA Volume One Part 5 Sound Transmission and Insulation "Deemed-to-Satisfy Provisions" for up to date information.

### GLOSSARY OF TERMS

#### $R_w$

The Weighted Sound Reduction Index refers to the airborne sound insulating rating of a particular building element. This value is measured in a laboratory environment and is applied to walls, ceilings/floors, ceilings/roofs as well as to doors and windows.

The higher the numerical rating the greater the sound insulating value of the relevant building element.

#### $R_w + C_{tr}$

The addition of the  $C_{tr}$  refers to a spectrum adaptation term for a rating which adds a correction for the effects of low frequency sound. The use of the term  $R_w + C_{tr}$  has been necessary due to the increase in low frequency sound sources such as surround sound systems, traffic and aircraft noise as well as some musical instruments, the "doof, doof" factor if you will?

Two walls might have the same  $R_w$  rating but not the same resistance to low frequency sound therefore it may be necessary to adjust the design of the wall which is likely to be affected by the low frequency sound

### Discontinuous Construction

The BCA states that discontinuous construction means having a 20mm cavity between 2 separate leaves, i.e. a double steel stud wall or similar with a 20mm cavity between the studs.

### Sources and further recommended reading:

*It is important to keep up with current guidelines in respect to the important issue of sound insulation. Judah recommends that if unsure reference should be made to the major plasterboard manufacturer's literature as well as to current ACBC – Australian Building Code Board publications.*

### NOTE:

The result of the impact sound insulation requirements is that the Judah QUIET STUD® cannot be used as a single leaf construction where impact sound insulation is required. However, this should only be in isolated cases in apartments as good design practice will ensure mirrored image layouts where habitable rooms are immediately adjacent to one another and non-habitable rooms likewise (see page [151](#)).

# JUDAH QUIET STUD® ACOUSTIC SYSTEM

## PERFORMANCE COMPARISON

To fully understand how innovative the Judah QUIET STUD® performs as an acoustic solution, comparison tests were conducted using the exact same configuration of plasterboard lining, insulation, sealants and installation details on both a standard Judah 92mm x 0.55bmt lipped C Steel Stud and the Judah 92mm x 0.55bmt QUIET STUD® to compare performance.

As can be seen from the results shown in Table 3, the Judah QUIET STUD® had a significant increase in performance both in the  $R_w$  value (5dB better performance) and the combined  $R_w + C_{tr}$  value (8dB better performance) when compared to the standard Judah lipped C Steel Stud section. Even better performance can be expected when compared to timber stud framing of equal width.

Comparison tests were also performed using the exact same plasterboard, insulation and sealant configuration, but using staggered 2 1/2" x 1 1/4" x 25 GA lipped C steel studs in a 3 5/8" track. The Judah QUIET STUD® system achieved the same  $R_w + C_{tr}$  performance as the staggered stud systems, yet is a much simpler system to install.

**TABLE 3: PERFORMANCE COMPARISON WITH TRADITIONAL LIPPED C STUD**

STUD	BOARD LININGS	INSULATION	$R_w$	$C_{tr}$	$R_w + C_{tr}$	CSIRO TEST NO.	
Judah 3 5/8" x 22 GA lipped steel stud	2x1/2" Fire-Rated plasterboard (mass 21kg/m <sup>2</sup> ) both sides	TAC100	52	(-9)	43	TL434a	
Judah 3 5/8" x 22 GA QUIET STUD®	2x1/2" Fire-Rated plasterboard (mass 21kg/m <sup>2</sup> ) both sides	TAC100	57	(-6)	51	TL434d	

NOTES: 1. Insulation used was 100mm polyester infill, 14 kg/m<sup>3</sup> manufactured by Tontine Fibres.  
2. Tests conducted and verified at CSIRO laboratories, Highett, Melbourne in February/March 2005.

## JUDAH QUIET STUD® ACOUSTIC SYSTEM (continued)

### ACOUSTIC PERFORMANCE

Judah QUIET STUD® has been subject to rigorous acoustic testing at both CSIRO Acoustic Laboratory in Melbourne and Auckland University Acoustic Laboratory using a variety of plasterboard linings. The suggested Noise Control Systems listed on the following page are the results of such testing. However, the respective plasterboard manufacturer should be contacted to determine the final acoustic specification as they may hold more recent test data than those suggested systems listed. They can also determine fire resistance of the nominated system where this is applicable.

### FIRE RATING

QUIET STUD® will behave in a similar way to traditional lipped steel studs in a fire\*.

For full fire rating information contact your respective plasterboard manufacturer.

*\*NB: QUIET STUD® has been the subject of BRANZ Report FAR 2521 to determine fire resistance.*

### PLASTERBOARD (AND OTHER LINING BOARDS)

Judah QUIET STUD® has been developed in conjunction with leading plasterboard manufacturers. These manufacturers each make a range of Fire-Rated and Sound-Rated plasterboard linings and they can quickly determine the optimum configuration to achieve the desired level of performance using the Judah QUIET STUD®.

Test certifications or expert opinions based on the original test results can be supplied. Judah recommends that prior to specifying or installing QUIET STUD®, your respective plasterboard manufacturer be contacted to provide the final, optimal design.

Judah QUIET STUD® could be installed using other wallboard linings (fibre cement sheet etc) but it is best to contact the lining board manufacturer for an opinion on acoustic performance.

### INSULATION (SOUND CONTROL INFILL)

Insulation or sound control infill plays an integral part in the performance of the acoustic wall system. It is therefore most important that the insulation used on your project is of equal or better acoustic performance to that used in our various tested systems on the following page. The respective insulation or plasterboard system manufacturer can easily and quickly verify acoustic performance.

### FIRE/ACOUSTIC SEALANT

Acoustic performance of a stud wall system is severely degraded by the presence of gaps in

the constructed system. These can occur around penetrations or perimeters. To maintain acoustic performance, it is therefore critical to ensure that all perimeters and penetration gaps are carefully sealed using high-quality acoustic sealant to make construction virtually air-tight. Please refer to the respective plasterboard manufacturer for their acoustic sealant specification. If the system is required to be fire-rated, then the sealant will also need to be fire-rated.

### DIFFERENCE BETWEEN LABORATORY & ON-SITE RESULTS

The ratings and values stated on the following page have been achieved through testing and calculation with precise techniques and equipment under ideal controlled conditions.

To attain optimum performance on-site, careful attention to detail in the design and construction is paramount. If the basic principles of good acoustic design and construction practice are ignored, the performance of the system can be jeopardised. It is therefore most important that the specifications of the plasterboard manufacturers are strictly followed on site.

Based on industry advice, the BCA allows a concession of up to 5dB in performance when tested on-site where measurement sometimes is not ideal (*i.e. background noise or the size/volume of the tested room can affect results, etc.*).

As a consequence, Judah cannot guarantee that the results on the following page will be matched on-site but with careful attention to detail during the erection of the stud wall system, and by strictly following the installation details of the plasterboard manufacturers, the assembly should produce a result closely comparable with the tested or estimated values.

### SUGGESTED NOISE CONTROL SYSTEMS

(WHERE  $C_{TR}$  VALUE NOT TAKEN INTO CONSIDERATION)

It must be noted that some Australian states have not yet adopted current BCA sound provisions for Class 1, 2, 3 & 9c buildings. In some cases, only an  $R_w$  rating value is required.

This is equally so for non-residential buildings which are not so affected by the low bass-type frequencies from electronic sound equipment. Judah QUIET STUD® is just as effective in helping reduce noise transmission from room to room in non-residential buildings (*i.e. offices, schools, universities, hospitals, etc.*). Table 5 shows indicative  $R_w$  values only using QUIET STUD® and various plasterboard configurations.

**TABLE 4: QUIET STUD ACOUSTIC SYSTEMS – CLASS 1, 2, 3 & 9C RESIDENTIAL BUILDINGS**

STUD	BOARD LININGS	INSULATION	R <sub>w</sub>	C <sub>TR</sub>	R <sub>w</sub> +C <sub>TR</sub>	CSIRO TEST NO.	
Judah 3 5/8" x 20 GA QUIET STUD®	3/8" Sound-Rated plasterboard (mass 8.2kg/m <sup>2</sup> ) + 1/2" Fire-rated plasterboard (mass 10.5kg/m <sup>2</sup> ) 1 side 1 x 1/8" Fire-rated plasterboard (mass 10.5kg/m <sup>2</sup> ) other side	TAC100 4" polyester 14kg/m <sup>3</sup>	53	(-9)	44	TL434e	
Judah 3 5/8" x 20 GA QUIET STUD®	2x1/2" Fire-Rated plasterboard (mass 21kg/m <sup>2</sup> ) 1 side 1 x 1/2" Fire-rated plasterboard (mass 10.5kg/m <sup>2</sup> ) other side	100NCB 4" glass wool 14kg/m <sup>3</sup>	55	(-7)	48	TL434c	
Judah 3 5/8" x 20 GA QUIET STUD®	2x1/2" Fire-Rated plasterboard (mass 21kg/m <sup>2</sup> ) both sides	TAC100 4" polyester 14kg/m <sup>3</sup>	57	(-6)	51	TL434d	
Judah 3 5/8" x 20 GA QUIET STUD®	2x1/2" Fire-Rated plasterboard (mass 21kg/m <sup>2</sup> ) both sides	100NCB 4" glass wool 14kg/m <sup>3</sup>	57	(-5)	52	TL434b	

- NOTES: 1. Insulation: TAC100 = 4" polyester infill, 14 kg/m<sup>3</sup> manufactured by Tontine Fibres or equal equivalent.  
100NCB = 4" glass wool Noise Control Batts, 14 kg/m<sup>3</sup> manufactured by Insulation Solutions or equal equivalent.
2. Judah 3 5/8" x 22 GA QUIET STUD® friction fit to track @ 64" centres.
3. Tests conducted and verified at CSIRO laboratories, Highett, Melbourne in February/March 2005.
4. Consult with your plasterboard manufacturer/supplier to verify their particular brand of plasterboard and accompanying system will achieve at least equal results to those above.

**TABLE 5: QUIET STUD NOISE CONTROL SYSTEMS – NON-RESIDENTIAL BUILDINGS**

STUD	BOARD LININGS	INSULATION	R <sub>w</sub> RATING	
Judah 3 5/8" x 22 GA QUIET STUD®	1x1/2" Fire-Rated plasterboard (mass 10.5kg/m <sup>2</sup> ) both sides.	Either TAC100 or 100NCB (14kg/m <sup>3</sup> )	50 ± 1 dB	
Judah 3 5/8" x 22 GA QUIET STUD®	2x1/2" Fire-Rated plasterboard (mass 21kg/m <sup>2</sup> ) 1 side 1 x 1/2" Fire-rated plasterboard (mass 10.5kg/m <sup>2</sup> ) other side	Either TAC100 or 100NCB (14kg/m <sup>3</sup> )	55 (CSIRO test TL434c with glass wool)	
Judah 3 5/8" x 22 GA QUIET STUD®	2x1/2" Fire-Rated plasterboard (mass 21kg/m <sup>2</sup> ) 1 side, 3x1.2" Fire-Rated plasterboard (mass 31.5kg/m <sup>2</sup> ) other side.	Either TAC100 or 100NCB (14kg/m <sup>3</sup> )	60 ± 1 dB	

- NOTES: 1. Calculations based on systems tested at CSIRO laboratories, Highett, Melbourne.
2. Insulation: TAC100 = 4" polyester infill, 14 kg/m<sup>3</sup> manufactured by Tontine Fibres or equal equivalent.  
100NCB = 4" glass wool Noise Control Batts, 14 kg/m<sup>3</sup> manufactured by Insulation Solutions or equal equivalent.
3. Consult with your plasterboard manufacturer/supplier to verify their particular brand of plasterboard and accompanying system will achieve at least equal results to those above.

# INSTALLATION DETAILS

## STRUCTURAL DESIGN

- All walls in this brochure using QUIET STUD® have been designed as internal, non-loadbearing walls.
- These walls have been designed for lateral loads only using the composite action of the studs and sheeting.
- The walls have been designed to meet the design pressure of ultimate 0.375kPa and serviceability 0.25kPa. Deflection has been limited to height/240 (based on *BCA and IBC Specification – Structural Tests for Lightweight Construction*).
- For walls with higher wind loadings or for enquiries outside the scope of this document, please contact your specialist Judah Technical Representative.

## FRAMING

- Judah 3 5/8"x32mmx0.55bmt steel top & bottom wall track nominally fixed at 600mm centre maximum spacings to floor and ceiling and within 4" of end of track section or,
- If a Deflection Head is required or the wall is above 16' in height, install Judah 3 5/8" x2"x20 GA deflection head track at top of frame.
- QUIET STUD 3 5/8"x2"x22 GA nominal with a 6mm return installed @ 600mm maximum centre spacings (or as specified – refer to *Table 6 Maximum Wall Heights on Page 159*).
- Studs should be a friction fit installation to track section to allow an approx 3/5" expansion gap at the top of the frame (3/4" where a deflection head detail is required or as nominated by the structural engineer).
- First and end studs may be fixed to the track section with #8g Metal Tek screws for extra rigidity.
- Ensure studs are aligned in the same direction except for end stud.
- Studs may be boxed around door or window openings for added rigidity.
- No Noggings are required in QUIET STUD® applications providing walls are lined both sides of the stud frame in accordance with plasterboard manufacturers' specifications.
- To maintain the integrity of the acoustic wall system, try and avoid heavyweight fixtures from being attached to the stud wall frame. Where this is unavoidable, Judah can provide specialist

advice through our Technical Representatives (phone +1 352-328-1482).

For lightweight fixtures such as towel rails, taps, etc., a timber Nogging/batten may be installed between the studs with one of the studs being installed the reverse way so that the web of the two studs are facing each other. Ensure that acoustic or fire sealant, as recommended by the lining board manufacturer, is used around any penetrations to maintain integrity of the wall frame.

## LINING BOARD:

### INSTALLATION, FIXING, FINISHING & JOINTING

- Please refer to the respective plasterboard or other lining board manufacturer for their complete lining and finishing specifications.
- Judah recommends that the lining board be installed as per the requirements of Standard.

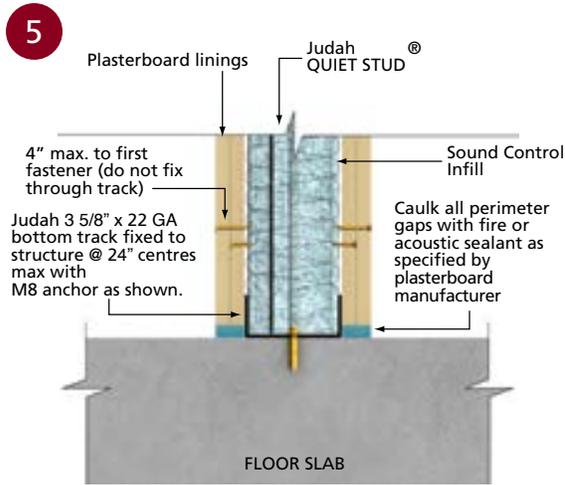
– *"Gypsum linings in residential and light commercial construction – application and finishing"*

## SOUND CONTROL INFILL

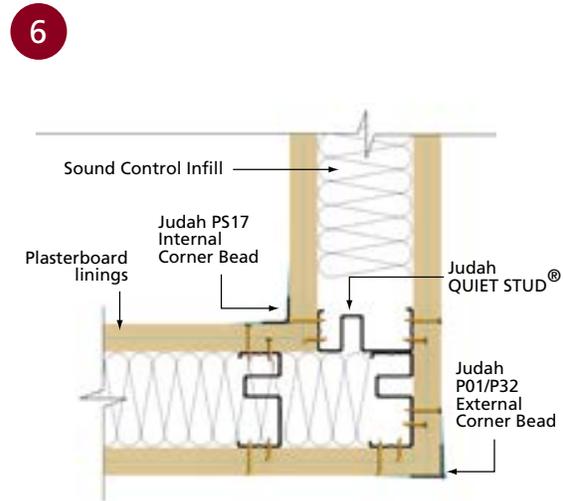
- Judah has conducted thorough acoustic testing of various QUIET STUD® wall systems using several insulation types. To ensure a fail-safe acoustic control system Judah recommends using high quality acoustic insulation either as per our Noise Control Systems listed on page 157 or that equal in performance through verification from the insulation manufacturer or the plasterboard system manufacturer.
- Fit insulation between QUIET STUD® at nominated centres.

## ACOUSTIC SEALANT & CAULKING

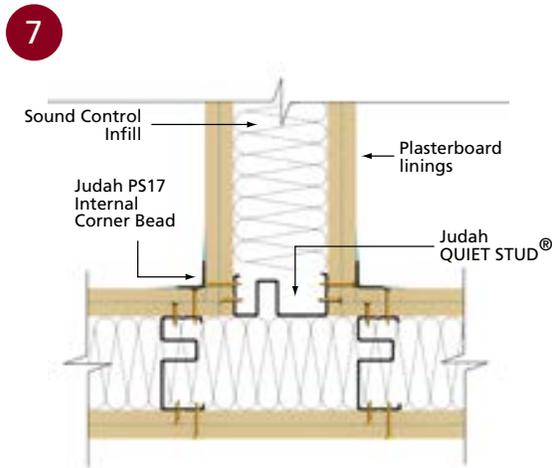
- To attain specified acoustic performance (and FRL performance where nominated) it is essential that high quality fire and acoustic rated sealant be used at all perimeter gaps and around all penetrations.
- Please refer to the respective plasterboard or other lining board manufacturer for their complete specifications on the installation of acoustic sealant and caulking.



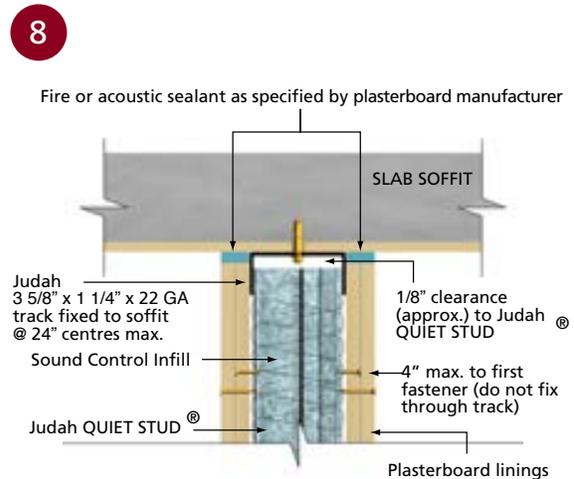
■ WALL BASE DETAIL



■ CORNER DETAIL



■ 'T' INTERSECTION DETAIL



■ WALL HEAD DETAIL (FRICTION FIT HEAD)

TABLE 6: MAXIMUM WALL HEIGHTS

PLASTERBOARD	STUD CENTRES	
	24"	18"
1 x 3/8" Both Sides	12'	13'
1 x 1/2" Both Sides	14'	14.5'
1 x 5/8" Both Sides	14'	15'
2 x 3/8" Both Sides	12'	13'
2 x 1/2" Both Sides	13.5'	14.5'
2 x 5/8" Both Sides	14'	15'

**NOTES:**

1. Lateral pressure is 0.25kPa in accordance with the IBC and BCA Specification C1.8.
2. Deflection limited to span/240
3. All walls above contain NO Nogging

**IMPORTANT**

It is critical that the correct size fastener is chosen when fixing plasterboard sheets to Judah QUIET STUD®. The screws must NOT penetrate through the stud flange into the return leg of Judah QUIET STUD® which is 1" from the stud flange in one direction. Typically, a 1" long 'Type S' needle point screw is ideal for fixing the first layer of plasterboard. Clarification should be sought from the respective plasterboard manufacturer for fixing subsequent layers of plasterboard.



## MUCH MORE THAN JUST QUALITY PRODUCTS

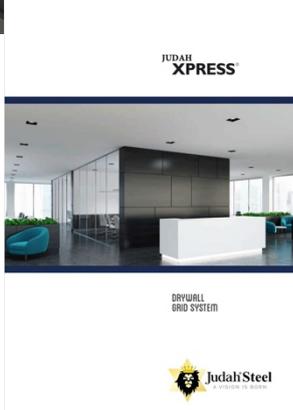
We go beyond supplying you with quality products. We give you access to a full suite of tools and services to help you get the job done right and with the confidence that we'll support you every step of the way.

- ✓ **TECHNICAL SUPPORT** We offer expert technical advice from our team of professional Engineers and Technical Representatives who can support you from beginning concepts all the way through to building completion.
- ✓ **WRITTEN WARRANTY** Our products are 100% code compliant and we guarantee that they'll perform to our exacting specifications with a written warranty to give you added peace of mind.
- ✓ **PRODUCT QUALITY** Our state-of-the-art manufacturing technology ensures you receive the highest quality product, with most of our roll-formed products manufactured from the strength of BlueScope Steel.
- ✓ **QUALITY CONTROL** We have a reputation for uncompromising quality and total code compliance. Our certification to internationally recognised, Lloyd's Register Quality Assurance ISO 9001 is evidence of this.
- ✓ **DELIVERY SERVICE** We offer a reliable and efficient delivery service, with products delivered in full and on time whether it is on site or to store.
- ✓ **TECHNICAL RESOURCES** We've developed market-leading technical resources that are available in print and digitally to help you get the job done.
- ✓ **REPUTATION** It's our reputation for high-quality products backed by exceptional customer service that has led to us being behind the best buildings around the world. It's a reputation you can rely on.
- ✓ **ENVIRONMENTAL PERFORMANCE** We can offer you additional Green Points due to our participation in the Environmental Sustainability Charter and our Environmental Management System is accredited to ISO14001.
- ✓ **CORPORATE SOCIAL RESPONSIBILITY** Through purchasing Judah products, you are also supporting local communities we give back to. We're focused to help kids with cancer, with our main partner, The Kids Cancer Project. Their goal is to reduce the rate of childhood cancer through funded research initiatives.

Judah, BETAGRIP and KEY-LOCK are registered trademarks



# Judah® Products



WALLS

CEILINGS

FINISHING SECTIONS

ACCESS PANELS

ACCESSORIES

what's behind it all  
**Manufacturing Capabilities**



Our manufacturing capabilities are highly flexible, versatile and innovative. We can manufacture a vast number of products on any one machine, which means not only can we produce our standard range at fast rates but we can also customise products to suit your individual project needs. It's our ability to provide tailored solution that has led to us being a part of the best projects here in Malaysia and overseas. That's why...

**We're behind the best buildings**



## Why Judah® Our support

### WARRANTY

As market leader, we have a reputation to uphold - a reputation for uncompromising quality and total code compliance, backed by our technical expertise and the strength of BlueScope Steel.

That's why we can guarantee that our products will perform to your exacting specifications. And we put it in writing with the Judah Warranty.

That's the confidence you get when you buy a genuine Judah product.

### DESIGN SOLUTIONS

Every Judah customer has access to the very best technical advice from our own engineering and design experts, who offer a comprehensive design service to assist from beginning concepts all the way through to the building completion.

Such designs include but are not limited to:

- Acoustic Wall and Ceiling Systems
- External Wall and Ceiling Systems
- Fire-rated Wall and Ceiling Systems
- Non-Fire-rated Wall and Ceiling Systems

Check out our website to view projects we have provided design assistance to, or to submit your own technical enquiry.

### TECHNICAL RESOURCES

We've taken the time to develop a website that is a user-friendly resource for accessing product information, CAD drawings, installation videos, company news – as well as using our market-leading design calculators, Judah wizards. Additionally, you can access the Judah Wizards using Judah's handy website.

You can be the first to hear about new products, promotions, and other company news before the rest of the industry. Visit the website by going to <https://www.judah-steel.com/> and subscribe.

### PRODUCT TRAINING

Judah offers all of our customers' access to complimentary training with Judah Learning Online, Skills 1 for Beginners and Skills 2 for Intermediates.

You can complete Judah Learning Online by visiting [www.Judah-Steel.com](http://www.Judah-Steel.com) (Request username and password) which covers six of our major product groups.

To find out when the next Judah Skills Product Training course is on near you, and to register your seat, visit <https://www.judah-steel.com/> today.



## Material safety data sheet

### MATERIALS

Products are produced from coated steel coil material which is classified as a non-hazardous material.

### PRODUCTION PROCESSES

A water-based soluble lubricant is used to assist with the roll-forming process. These soluble lubricants are not considered hazardous when used as recommended by the manufacturer.

### HANDLING AND STORAGE

Products are supplied in pack and sub-pack quantities and should be handled in accordance with the recommendations contained in AS 1470 – Health and Safety at Work Principles and Practice.

Where mechanical lifting or moving equipment is required, trained and licensed operators are to be used.

Metal products should be stored in an environmentally friendly area away from airborne contaminants such as acid and salt sprays.

### SAFETY

It is our recommendation that protective clothing should be worn when handling metal products (AS 2161 – Occupational Protective Gloves) and that they should be checked regularly for damage.

People with sensitive skin conditions should seek medical advice before prolonged handling of metal products; hands should be washed before eating and for personal hygiene.

Non-fogging goggles (AS/NZS 1336) should be worn when cutting metal sections. **SITE TRAINING**

It is the responsibility of the contractor to ensure his employees are trained in onsite OSHA procedures as these can vary from site to site.

### FLAMMABILITY

Non-flammable

### NOTE: Mixing of Systems

The issue of mixing components produced by different system's manufacturers in a suspended ceiling or drywall installation is of concern in the construction industry, as attention to onsite safety and systems performance increases. Judah's ceiling and wall systems are designed to meet the relevant standards and codes applicable to all construction project in USA. Systems have been tested to meet the requirements of those standards and codes by both independent testing authorities and the manufacturers. Framing components used during testing procedures are those produced by one manufacturer, as the components are designed to perform as a system.

When mixing different manufacturers' products within a system, no guarantee will be given. Differing design criteria and production tolerances can mean the components may not perform as intended.

Judah products are compliance with the following codes:

2021, 2018 and 2015 International Building Code® (IBC)

2021, 2018 and 2015 International Residential Code® (IRC)



# Installation Guide



## GENERAL

It is important to observe appropriate health and safety legislation when working on site i.e. personal protective clothing and equipments, etc. the following notes are intended for general guidance only. In practice, consideration must be given to design criteria requiring specific project solutions.

## HANDLING

Manual off-loading of this product should be carried out with care to avoid unnecessary back muscle strain.

## CUTTING

This product may be cut using a Plasterboard saw or by scoring with a sharp knife and snapping the board over a straight edge. Holes switch or socket boxes should be cut out, using a jab saw or a sharp knife, before the boards are fixed. When cutting boards, power and hand tools should be used with outmost care. Power tools should only be used by people who have been instructed and trained to use them safely. Appropriate personal protective equipment should be used.

## FIXING

Fix boards with decorative (face) side out to receive joint treatment or as a skim plaster finish.

## PLASTER BOARD WEIGHTS

All weights mentioned in Judah plaster product systems are approximate.

## MECHANICAL HANDLING

The dimensions of the stack vary depending on the product size. To avoid potentially overloading a forklift truck, it is important that any effect on load centers is considered.

## STORAGE

Boards must be stored flat and in dry condition. Practice good housekeeping and stock rotation. Support bearers under a stack of boards must not be more than 16 in apart.

# Disclaimer



Judah endeavors to ensure that all the information it gives is accurate and correct to the best of its knowledge, the designer or other recipient of the information must satisfy himself that the information is appropriate to the specific application. Judah expressly disclaims any and all liability as to any results obtained or arising from any use of product or reliance on such information.



## GENERAL

Studs should not be screw fixed to the top track.

Studs should be cut short based on the deflection & expansion gap (gap to be maintained at top).

Provide trim edges with edge trim where vertical edges of panels are exposed.

Build partition first and then the ceilings.

Higher performance wall takes priority at the junctions.

Movement joints should be given at appropriate places according to ASTM C 840 or specific locations approved by Architect for visual effect.

Judah systems are accessible with our Access panels.

## GENERAL NOTES FOR FIRE & ACOUSTIC RATED PARTITIONS

Horizontal & vertical board joints are to be staggered from side to side & layer to layer.

Seal joints between edges and abutting structural surfaces with fire and acoustical sealant.

Horizontal cut joints to be backed up using fixing channel or nogging track to achieve fire rating.

Vertical boarding to be followed for Judah Group fire rated systems.

Filling of the void with insulation will enhance acoustical rating.

Any service openings or potential weaknesses in an access element must be reviewed or advised by a Judah technician or certified specialist to ensure structural, fire, and acoustic integrity.

Fire and acoustic rating to be maintained at penetrations, electrical sockets and movement joints.

## WARRANTY ON PERFORMANCE RATED DRYWALL & CEILING SYSTEM

Judah only warrants the systems that have been installed in full compliance to Judah's instructions and specifications. Limitations of the warranty are specified in the Judah Warranty Certificate. The final system warranty letter will be issued only when the project was inspected by Judah Group's Technical team. Site inspections are performed to ensure the usage of correct components and adherence to design protocol. To conduct site inspections, it is the contractor's responsibility to inform Judah about the readiness of the system at various stages:

- After framing
  - After boarding and jointing on one side
  - After boarding & jointing on other side and application of sealant around the perimeters & penetrations
- (\* Before start of framing - for installers not approved by Judah )

## SUSTAINABILITY

Most Judah Products contribute to Regional Materials & Recycle Content Credits.



**[www.Judah-Steel.com](http://www.Judah-Steel.com)**

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Email: [Info@Judah-Group.com](mailto:Info@Judah-Group.com)







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A VISION IS BORN

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