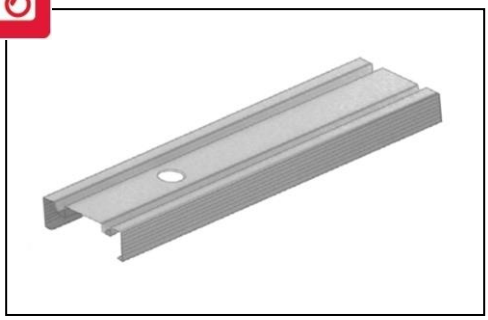
FORMAN
BUILDING SYSTEMS

FORMAN ACOUSTIC WALL

DESCRIPTION

Combining Pioneering acoustic stud technology with locally manufactured and trusted building materials, the Forman Acoustic Wall system has been developed and tested with New Zealand's challenging construction requirements in mind.

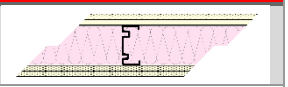
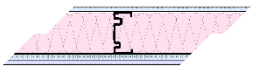
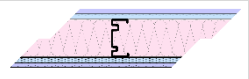
Forman Acoustic Wall system allows you to capitalize on the small footprint and high acoustic performance of acoustic steel stud, while still engineering a wall robust enough to withstand high seismic and wind pressures.

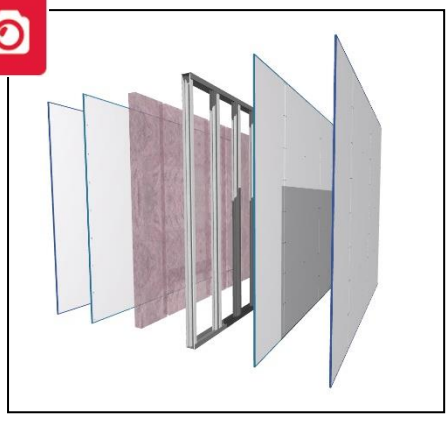


FEATURES & BENIFETS

- Great wall thickness to acoustic performance ratio. This allows for Intertenancy walls that maximize apartment floor area while delivering required acoustic performance.
- Independent acoustic testing by Auckland University.
- Acoustic testing with studs at 300ctrs proves Forman acoustic wall can be constructed tall while maintaining acoustic performance.

SYSTEM CONFIGURATION & PERFORMANCE

Code	STC	FRR	Lining and Insulation Requirements	Detail
FBSAW 45	56	-/45/45	2 x 13mm GIB® Standard Plasterboard each side. 100mm R2.2 Pink Batts.	
FBSAW 60	55	-/60/60	1 x 13mm and 1 x 10mm GIB Braceline®/GIB Noiseline® one side 1 x 13mm GIB Braceline®/GIB Noiseline® on the other side 100mm R2.2 Pink Batts.	
FBSAW 90	58	-/90/90	1 x 13mm and 1 x 10mm GIB Braceline®/GIB Noiseline® each side 100mm R2.2 Pink Batts.	



SYSTEM REQUIREMENTS

Framing can be at 600, 400 and 300 centres. See below tables for maximum wall heights.

Linings to be staggered.

A bead of Gib fire seal is required around the perimeter of the inner layer. The outer layer is then set onto the bead.

Inner layer: 25mm x 6g GIB® Grabber® Self Tapping Drywall Screws.
Outer layer: 41mm x 6g GIB® Grabber® Self Tapping Drywall Screws.

Fixings at 300mm centres.

INTERNAL NON-LOAD BEARING ACOUSTIC STUD WALL HEIGHT TABLES (mm)

Ultimate wind pressure W_u (kPa)	0.39	**Acoustic stud walls lined full height on both sides with 0.55mm BMT Deflection Head Track**	Up to BCA Building Importance level 3
Serviceability wind pressure W_s (kPa)	0.25		

Stud Depth and BMT (mm)	Maximum Stud Centres (mm)	Deflection limited lo H/240 or 30mm max Untiled plasterboard wall lining		Deflection limited lo H/360, or 20mm max Any tiled wall, or untiled fibre cement wall lining	
		Min 13mm plasterboard lining each side.	13mm + 10mm plasterboard lining each side.	Min 13mm plasterboard lining each side.	13mm + 10mm plasterboard lining each side.
92 X 0.55 Acoustic Stud	600mm	3760	3760	3760	3760
	400mm	4130	4130	4130	4130
	300mm	4130	4130	4130	4130

Ultimate wind pressure W_u (kPa)	0.39	**Acoustic stud walls lined full height on both sides with 0.7mm BMT Deflection Head Track + Soldier Studs**	Up to BCA Building Importance level 3
Serviceability wind pressure W_s (kPa)	0.25		

Stud Depth and BMT (mm)	Maximum Stud Centres (mm)	Deflection limited lo H/240 or 30mm max Untiled plasterboard wall lining		Deflection limited lo H/360, or 20mm max Any tiled wall, or untiled fibre cement wall lining	
		Min 13mm plasterboard lining each side.	13mm + 10mm plasterboard lining each side.	Min 13mm plasterboard lining each side.	13mm + 10mm plasterboard lining each side.
92 X 0.55 Acoustic Stud	600mm	4130	5350	4320	4440
	400mm	5970	5970	5030	5200
	300mm	6150	6150	5540	5750

Ultimate wind pressure W_u (kPa)	0.54	**Acoustic stud walls lined full height on both sides with 0.7mm BMT Deflection Head Track + Soldier Studs**	Up to BCA Building Importance level 3
Serviceability wind pressure W_s (kPa)	0.35		

Stud Depth and BMT (mm)	Maximum Stud Centres (mm)	Deflection limited lo H/240 or 30mm max Untiled plasterboard wall lining		Deflection limited lo H/360, or 20mm max Any tiled wall, or untiled fibre cement wall lining	
		Min 13mm plasterboard lining each side.	13mm + 10mm plasterboard lining each side.	Min 13mm plasterboard lining each side.	13mm + 10mm plasterboard lining each side.
92 X 0.55 Acoustic Stud	600mm	4440	4440	3740	3820
	400mm	4440	4440	4370	4440
	300mm	4440	4440	4440	4440

Ultimate wind pressure W_u (kPa)	0.70	**Acoustic stud walls lined full height on both sides with 0.7mm BMT Deflection Head Track + Soldier Studs**	Up to BCA Building Importance level 3
Serviceability wind pressure W_s (kPa)	0.45		

Stud Depth and BMT (mm)	Maximum Stud Centres (mm)	Deflection limited lo H/240 or 30mm max Untiled plasterboard wall lining		Deflection limited lo H/360, or 20mm max Any tiled wall, or untiled fibre cement wall lining	
		Min 13mm plasterboard lining each side.	13mm + 10mm plasterboard lining each side.	Min 13mm plasterboard lining each side.	13mm + 10mm plasterboard lining each side.
92 X 0.55 Acoustic Stud	600mm	3420	3420	3370	3420
	400mm	3420	3420	3420	3420
	300mm	3420	3420	3420	3420

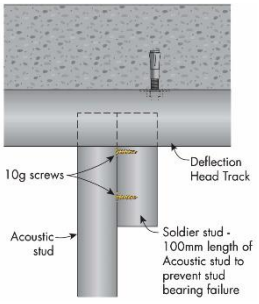
ANCHOR DEMAND TABLE

Wall height (mm)	Shear (kN)	Pull-out (kN)
0 - 5870	0.75	0.75

1 . Min 8g x 45mm masonry anchors at 600mm max centres and 100mm max from ends.

Contact Forman Building Systems for specific design advice.

SOLDIER STUD DETAIL



1. Maximum wall heights based upon lateral pressures and the deflection limits stated. Table not suitable for external walls.
2. No noggings ore required in acoustic stud walls.
3. Wall heights include self-weight but are not applicable to axially loaded (load bearing) studs. Point loads and other loads such as shelf loads, or live loads are not considered and must be checked with Knauf.
4. Wall heights have not been checked for earthquake actions or any imposed ceiling loads during an earthquake.
5. Tables refer to Knauf Acoustic Steel Studs of grade G300 steel with Zincalume™ AM 150 corrosion protection. Maximum production lengths available are 6.0m
6. Calculations based upon a single span and designed in accordance with AS/NZS 4600:2005 Cold Formed Steel Structures.
7. Base track must be 0.5mm Base Metol Thickness (BMI) or greater. Deflection Head Track BMT is stated in the table.
8. Connections to Bose track and head track checked. Head track checked with a maximum 20mm overlap length of the stud to DH-Track (max 20mm downward and 10mm upwards overhead soffit deflection).
9. 9. The project engineer must approve the nominated lateral pressures and deflection limits are appropriate for a specific project.