

5216.1SPW SPEEDWALL PANELISED PARTYWALL PARTITIONS

1. GENERAL

This section relates to the **Speedwall**[®] non-loadbearing Partywall system for internal partywall partitions.

Related work

1.1 RELATED SECTIONS

Refer to 5113G for Plasterboard Linings & 3821 for Timber Framing

Documents

1.2 DOCUMENTS REFERRED TO

Documents referred to in this section are:

NZBC C	Fire Safety
NZBC G6	Airborne and impact sound
AS/NZS 1170	Structural design actions – (parts 0 to 4)
NZS 1170.5	Structural design actions - Earthquake actions – New Zealand
AS 1397	Steel sheet and strip – Hot dipped zinc coated or aluminium zinc coated
AS 1538	Cold formed steel structures code
NZS 3101	Concrete structures standard
NZS 3404 (1997)	Steel Structures Standard

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.3 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:

Speedwall[®] New Zealand Ltd Technical and Installation Manual.
BRANZ Appraisal No. 559 - Speedwall[®] System
Speedwall Partywall installation Guide

Copies of the above literature are available from **Speedwall**[®] New Zealand Ltd.

Web: www.speedwall.co.nz
Email: info@speedwall.co.nz
Phone: 07 849 7062
Fax: 07 849 7063

Requirements

1.4 QUALIFICATIONS

All installation and sealing of the panels to be carried out by an experienced building contractor.

1.5 ACCEPTABLE SUPPLIERS

In some cases **Speedwall**[®] systems require the use of accessories from other manufacturer's to meet specific performance requirements. These are:

- GIB[®] Plasterboard lining and fixings – Speedwall[®] fire and noise control systems
- Tasman Insulation New Zealand: Pink[®] Batts[®] Insulation – Speedwall[®] noise control systems
- Hilti (New Zealand) Ltd sealants and grout – Speedwall[®] systems
- Fortress Fasteners, Manufacturing Supplies Ltd – Speedwall[®] systems
- Rondo[®] Steel Stud and Track Installation Manual -Speedwall[®] noise control systems
- USG[®] Drywall Steel Stud and Track Systems – Speedwall[®] noise control systems

Refer to other manufacturer's details for specific information on their products.

Warranties

- 1.6 **WARRANTY – INSTALLER**
Provide an installer/applicator warranty
- 5 years For workmanship
- Provide this warranty in the installer/applicator standard form.
 - Commence the warranty from the date of practical completion of the contract works.

- 1.7 **WARRANTY - MATERIALS**
Provide a material manufacturer/supplier warranty: 15 years
- Refer to **Speedwall**[®] New Zealand Ltd for details of Materials Warranty
- Provide this warranty on the manufacturer's standard form.
 - Commence the warranty from the date of practical completion of the contract works.
- Refer the section WARRANTIES for additional requirements.

Performance

- 1.8 **DESIGN REQUIREMENTS**
The supporting structure must be designed to NZS 3101, NZS 3404 or an appropriate Standard and be supported by a Producer Statement prepared by a Professional Engineer. Refer to **Speedwall**[®] Technical and Installation Manual for information relating to panel spans. Refer to SELECTIONS for design requirements.
- 1.9 **FIXINGS, WIND**
Design and use the fixings appropriate for the wind loads on various elements as given by AS/NZS 1170. Refer to **Speedwall**[®] Technical and Installation Manual.
- 1.10 **FIXINGS, EARTHQUAKE**
Use fixings and methods capable of sustaining the loads appropriate to the area as required by NZS 1170.5. Refer to **Speedwall**[®] Technical and Installation Manual.
- 1.11 **FIRE TESTS**
Speedwall[®] fire testing and results were found to be satisfactory by BRANZ for NZBC C3 and covered in the following Appraisal:
- BRANZ Appraisal No. 559 - **Speedwall**[®] System
- BRANZ Appraisal FAR 3712 Fire Resistance of a Speedwall dividing two premises
- 1.12 **NOISE CONTROL TESTS & Opinions**
Speedwall[®] noise control testing and results were found to be satisfactory by BRANZ for NZBC G6 and covered in the following Appraisal:
- BRANZ Appraisal No. 559 - **Speedwall**[®] System
- Hegley Acoustics Opinions for PWFS1/1-PWS1/2-PWFS1/3-PWFS1/4

2. PRODUCTS

Materials

2.1 SPEEDWALL PANELS

Tongue and groove-jointed cold roll formed steel shells to AS 1538 and galvanised to AS 1397, filled with proprietary aerated concrete infill. Paint coated steel coil can also be used on one or both sides.

Panel size nominal:	250 mm high cover, 78 mm wide
Panel length:	Manufactured up to 9.4m.
Panel density:	400kg/m ³ to 600kg/m ³
Metal thickness:	0.4 mm BMT

2.2 SPEEDWALL TRACKS

Speedwall[®] C Track and **Speedwall**[®] Angle, cold roll formed steel to AS 1538 and galvanised to AS 1397, form the edges and perimeters of the panels. Also available powder coated.

C Track:	60 mm x 80 mm x 60 mm x 1.15bmt x 3.6m 90 mm x 80 mm x 90 mm x 1.15bmt x 3m
Angle:	60 mm x 60 mm x 1.15bmt
Metal thickness:	1.15 mm BMT
Track length:	from 3.0m up to 3.6 m.

Components

2.3 SCREW FIXINGS

Self drilling, self tapping to suit the member, connection method and location. Refer to **Speedwall**[®] Technical and Installation Manual, and the fixing manufacturers printed data in the **Speedwall Partywall Installation Guide**

<u>Location</u>	<u>Type</u>
C Track to concrete	6.5x32 Hilti DBZ masonry fixings
C Track to steel	Hilti [®] X-ENP-19 L15MX
Track to panel	10g x 16mm C3 Steeltite wafer head screws
Panel to panel	10g x 16mm C3 Steeltite wafer head screws
C Track to C Track (Back to Back)	14g x 22mm C4 Hex-head Steeltite screws
Aluminium Bracket PN AB100 to Speedwall Panel	14g x 32mm C4 Hex-head Steeltite screws
Aluminium Bracket PN AB100 to Timber	14g x 32mm C4 Hex-head Timbertite screws

2.4 POWDER ACTUATED FASTENERS

To type, size and charge required by the powder actuated tool manufacturer, to suit the member, connection method and location. Refer to **Speedwall**[®] New Zealand Ltd Technical and Installation Manual, and the fixing manufacturers printed data.

2.5 FIRE SEALANT

Speedwall[®] **Speedseal**[®] fire resistant joint filler.
or Hilti[®] CP606 Flexible firestop sealant

Accessories

- 2.6 TIMBER FRAMING
- 2.7 INSULATION for PWFS1/1, PWFS1/2, PWFS1/3, PWFS1/4 Speedwall Partywall Systems
R1.8, 75 mm Pink[®] Fibreglass Batts[®].
- 2.8 GIB[®] BOARD
GIB[®] plasterboard sheets to suit **Speedwall[®]** fire rated and noise reduction systems;

<u>Speedwall[®] system</u>	<u>GIB[®] product</u>
PWFS1/1	10mm GIB [®] Standard [®]
PWFS1/2	10mm GIB [®] Standard [®] - 10mm GIB [®] Noiseline [®]
PWFS1/3	10mm GIB [®] Noiseline [®] - 10mm GIB [®] Aqualine [®]
PWFS1/4	13mm GIB [®] Standard [®] - 10mm GIB [®] Aqualine [®]

3. EXECUTION

Conditions

- 3.1 TOUCH-UP
In situ touch up of factory applied finishes is not to be permitted unless a trial repair is subsequently approved in writing. Replace all other panels with a damaged finish.
- 3.2 HANDLE AND STORE
Handle and store pre-finished panels and materials so that no damage will be done to the forms, materials, or finishes. Store and protect from weather and moisture, refer to Speedwall[®] NZ Ltd immediately if panels get wet. Do not expose the temporary plastic protective film to direct sunlight for more than a few hours.
- 3.3 UNLOAD
Unload, handle and store preformed and pre-finished panels in accordance with the manufacturer's stated requirements.
- 3.4 DO NOT DELIVER
Do not deliver to site any panels or elements which cannot be immediately unloaded into suitable conditions of storage.
- 3.5 PROTECTION
Avoid distortion of panels or elements during transit, handling and storage. Prevent pre-finished surfaces from rubbing together. Prevent contact with mud, plaster and cement, or with dissimilar metals.
- 3.6 ADJOINING STRUCTURE
Check adjoining structure for plumb, level and true alignment, as well as any fire rating required, do not start erection if **Speedwall[®]** requirements can not be met.

Application

- 3.7 **INSTALL TRACK**
Install C Track in accordance with **Speedwall**[®] Technical and Installation Manual & Speedwall Inter-tenancy Partywall System Guide. Co-ordinate with work of other sections Consult and coordinate as necessary with installers of adjoining work.
- 3.8 **INSTALL TRACK FOR FIRE AND NOISE CONTROL**
For fire rated and noise control systems, install C Track with a fire resistant joint filler, between it and the adjoining structure, in accordance with **Speedwall**[®] Technical and Installation Manual & Speedwall Inter-tenancy Partywall System Guide Co-ordinate with work of other sections. Consult and coordinate as necessary with installers of adjoining work.
- 3.9 **CUTTING PANELS**
Panels can be cut and openings made, in accordance with **Speedwall**[®] Installation and Design Manual.
- 3.10 **INSTALL PANELS VERTICALLY**
Install panels in accordance with **Speedwall**[®] Technical and Installation Manual & Speedwall Inter-tenancy Partywall System Guide. For fire rated and noise control systems, apply fire resistant joint filler to the appropriate area where the C track meets the **Speedwall**[®] Panel & Fit the last panel in accordance with **Speedwall**[®] the Installation Guides requirements. Co-ordinate with work of other sections. Consult and coordinate as necessary with installers of adjoining work.
- 3.11 **INSTALLING TIMBER FRAMING**
Install Timber framed walls in accordance with the Buildings design requirements. Refer SELECTIONS.
- 3.12 **INSTALLING INSULATION**
Install insulation in accordance with **Speedwall**[®] Installation and Design Manual. Refer SELECTIONS.
- 3.13 **INSTALLING PLASTERBOARD**
Install plasterboard in accordance with **Speedwall**[®] Installation and Design Manual, and the plasterboard manufacturer's requirements. Refer SELECTIONS.

Completion

- 3.14 **PROTECTION**
Protect all surfaces and finishes from damage as long as practicable. Remove protective film immediately after installation.
- 3.15 **CLEAN**
Remove all drilling swarf, screws and any other metallic debris from the surfaces daily.

On completion, remove debris, unused materials and elements from the site. Clean soiled or marked work. Replace damaged or marked elements. Leave the whole of this work to the standard required by following procedures.

4. SELECTIONS

Systems

4.1 SPEEDWALL® SYSTEMS

<u>Location</u>	<u>Speedwall® Partywall system</u>	<u>Fire rating</u>	<u>RW</u>	<u>STC</u>
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~	Speedwall® PWFS1/1	-/120/120	64	63
~	Speedwall® PWFS1/2	-/120/120	66	66
~	Speedwall® PWFS1/3	-/120/120	67	67
~	Speedwall® PWFS1/4	-/120/120	69	69

Panels

4.2 SPEEDWALL PANELS

Panel:	Speedwall® panel
Panel density:	400 kg/m ³
Panel direction:	Vertical
Panel finish:	Galvanised
C Track:	Speedwall® C Track
Track Angle:	Speedwall® Angle
Track finish:	Galvanised
Fire sealant:	Speedseal Fire and acoustic sealant or Hilti® CP606 Flexible firestop sealant.
Track to concrete	6.5x32 Hilti DBZ masonry fixings @ 400mm centres max
Track to structure fixings:	appropriate fixings @ 400mm centres max.
Track to panel fixings:	10g x16mm screws @ 500 mm centres on vertical track to panel & @ 250mm centres C-Track to panel ends.
Panel to panel fixings:	10g x16mm screws @ 750mm maximum centres along panel joints. Fix from both sides.
C Track to C Track (Back to Back)	14g x 22mm C4 Hex-head Steeltite screws Staggered @ 250mm centres. (Speedseal sealant applied between tracks)
Aluminium Brackets	Brackets 75x50x40x3mm at 500mm centers horizontally and 3 mtrs vertically (rubber washer inserts to timber) fixed with 14g x 32mm Timbertite and Steeltite screws

Accessories

4.3 TIMBER FRAMING

Timber stud type: 3821 for Timber Framing

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4.4 INSULATION

Speedwall® system: ~PWFS1/1, PWFS1/2, PWFS1/3, or PWFS1/4

Insulation type: R1.8, 75 mm Pink® Fibreglass Batts®.

4.5 PLASTERBOARD

Speedwall® system: 5113G for Plasterboard Linings
~PWFS1/1, PWFS1/2, PWFS1/3, PWFS1/4

Plasterboard type: ~10mm GIB® Standard®, 13mm GIB® Standard®
~10mm GIB® Aqualine®, 10mm GIB® Noiseline®

Fixings: 25mm x 6g GIB® Grabber™ scavenger head drywall
Self-tapping screws

Plasterboard Finish: Level ~