



BPIR Declaration

SimpleFix Hot Water Cylinder Restraint Kits

Version: 1 - 2024

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Declaration

Ray Staiger Limited has provided this declaration to satisfy the provisions of Schedule 1 (d) of the Building Regulations 2022 (Building Product Information Requirements).

Product Information:

Name	SimpleFix Hot Water Cylinder Restraint Kit
Range	From the range of SimpleFix Strapping Systems
Code	SIMKIT, SIMKIT/3, SIMKIT/ST, SIMKIT/ST3, SIMKIT/PC3

Designated Class:

Class 1

Description:

The SimpleFix Cylinder Restraint Kit contain:

Galvanised strap, 25 x 0.75 mm, G550 (powder-coated options also available).

Galvanised earthquake brackets.

Tensioning device.

Type 17 screws, 55 mm long.

M5 bolts and nuts for connecting the straps to the earthquake brackets.

The SimpleFix Stainless Cylinder Restraint Kit contain:

Grade 304 stainless steel strap, 25 x 0.70 mm, G550.

Grade 304 stainless steel earthquake brackets.

Grade 304 stainless steel tensioning device.

Grade 304 stainless steel type 17 screws, 55 mm long.

Grade 304 stainless steel M5 bolts and nuts for connecting the straps and the earthquake brackets.

Designed to restrain Hot Water Cylinders to meet the seismic requirements as set out in the NZBC.

Scope of Use:

Timber vertical blocking as described in NZBC Acceptable Solution G12/AS1 Paragraph 6.11.4 and Figure 14 must be installed. For external installations, suitably treated timber and fixings must be used. Additional timber framing may be required in retrofit situations to ensure adequate strap fixing is available. Separation between any treated timber and the water cylinder may be necessary.

SimpleFix and SimpleFix Stainless Cylinder Restraint Kits are installed in accordance with the Technical Literature. The earthquake brackets are screwed to the framing using the supplied screws. A suitable length of strap is then cut from the supplied reel. This is fixed to the earthquake brackets with the M5 bolts and nuts. The tensioner is then used to take up the slack in the strap.

Straps must not be installed where they clash with the water heater inlet, outlet or controls. Where the 100 mm maximum strap clearance from the top or bottom of the cylinder cannot be achieved, straps may be placed within the top and bottom 25% and one or two additional straps may be required. 1 additional strap placed centrally for water heaters up to 200 litres and 2 additional evenly spaced straps for cylinders 200-360 litres.

An additional centre strap is required where a storage water heater is located more than 12 m off the ground. This is additional to the numbers stated in Table 1 above.

A maximum total of four straps are required when complying with both 12.3 and 12.4.

Conditions of Use:

Must be installed using good building practice and in accordance with the installation document and additional guidelines including the ones stated in this document.

Relevant Building Code Clauses:

B1 Structure — B1.3.1, B1.3.2, B1.3.3 (f, h, j), B1.3.4

B2 Durability — B2.3.1 (a)

G12 Water Supplies — G12.3.5, G12.3.6

F2 Hazardous building materials — F2.3.1

Contributions to Compliance:

B1.3.1, B1.3.2, B1.3.3 (F,H,J), B1.3.4: The SimpleFix Seismic Restraint Kit has been approved by a registered engineer for water heaters up to 700 litres in accordance with the seismic design code NZS 1170.5:2004.

B2.3.1 (a): The components of SimpleFix Cylinder Restraint Kits are all steel. As long as they are kept dry in service, they are expected to have the same serviceable life as the cylinders that they restrain.

The components of SimpleFix Stainless Cylinder Restraint Kits are all Grade 304 stainless steel. They are expected to have the same serviceable life as the cylinders that they restrain

F2.3.1: The Simplefix Hot Water Restraint Kits are safe when handled. There are no additional requirements for these products.

G12 Water Supplies — G12.3.5, G12.3.6 The SimpleFix Hot Water Cylinder Restraint Kits are Branz Appraised to confirm they comply as an acceptable solution to the NZBC.

The number of straps required when using the SimpleFix and SimpleFix Stainless Cylinder Restraint Kits depends on the size of the cylinder to be restrained and the height of the cylinder within the building. Table 1 below gives the number of straps to be used.

8.2 When the cylinder is to be installed more than 12 m above the ground, an additional strap is required to the number given in Table 1.

Table 1: Cylinder Strap Requirements

Cylinder Size	Number of Straps Required
Up to 200 litre capacity	Up to 3
201 litre up to 360 litre capacity	Up to 4
361 litre up to 500 litre capacity	4
501 litre up to 600 litre capacity	5
601 litre up to 700 litre capacity	6

Supporting Documentation:

Supporting documentation can be made available upon request if not already available on www.simplefix.co.nz. This may include installation guides, Branz Appraisal, load ratings, mill certificates, or any other supporting information.

Company Details:

Manufactured on behalf and to the specification of Ray Staiger Limited in Taiwan & China.

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Responsibility:

To the best of the company's knowledge all information supplied in this declaration is based upon documentation and information supplied to RSL from genuine sources and is correct.

The SimpleFix Hot Water Cylinder Restraint Kits are not subject to a warning or ban under [s26 of the Building Act](#).

Building Code Performance Clauses:

B1 Structure

B1.3.1

Buildings, building elements and sitework shall have a low probability of rupturing, becoming unstable, losing equilibrium, or collapsing during construction or alteration and throughout their lives.

B1.3.2

Buildings, building elements and sitework shall have a low probability of causing loss of amenity through undue deformation, vibratory response, degradation, or other physical characteristics throughout their lives, or during construction or alteration when the building is in use.

B1.3.3

Account shall be taken of all physical conditions likely to affect the stability of buildings, building elements and sitework, including:

- (f) earthquake
- (h) wind
- (j) impact

B1.3.4

Due allowances shall be made for:

- a. the consequences of failure,
- b. the intended use of the building,
- c. effects of uncertainties resulting from construction activities, or the sequence in which construction activities occur,
- d. variation in the properties of materials and the characteristics of the site, and
- e. accuracy limitations inherent in the methods used to predict the stability of buildings

B2 Durability

B2.3.1

Building elements must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the specified intended life of the building, if stated, or:

- (a) the life of the building, being not less than 50 years, if: those building elements (including floors, walls, and fixings) provide structural stability to the building, or those building elements are difficult to access or replace, or failure of those building elements to comply with the building code would go undetected during both normal use and maintenance of the building

F2 Hazardous building materials

F2.3.1

The quantities of gas, liquid, radiation or solid particles emitted by materials used in the construction of buildings, shall not give rise to harmful concentrations at the surface of the material where the material is exposed, or in the atmosphere of any space.

G12 Water Supplies

G12.3.5

Sanitary fixtures and *sanitary appliances* must be provided with hot water when intended to be used for

- a. utensil washing; and
- b. personal washing, showering, or bathing.

G12.3.6

If hot water is provided to *sanitary fixtures* and *sanitary appliances* used for personal hygiene, it must be delivered at a temperature that avoids the likelihood of scalding.