

This statement is issued by EQ-Struc Ltd:

Regarding Silca system equipment used in conjunction with timber framing as joists.

EQ-Struc Ltd, engaged by Silca System, has provided the structural design of Silca System equipment used in conjunction with timber framing as joists. The timber joist spans shown in Tables 1 - 4 are designed in accordance with AS/NZS1170.1. Point loads are spread over 2 or 3 joists, and also have a limiting span as defined in NZS3604.

Silca System complies with clause BI/VM1, B2 (PCABS - Recycled Polycarbonate ABS Alloy with UV Stabiliser) of The New Zealand Building Code.

Table 1: Joist spans 2 kPa, 1.8kN

2 kPa, 1.8kN floor load SG8 Wet in service, Joist Centres @ 400mm crs					
Floor Joist Size	Paver or Natural Stone Thickness				
(mm x mm)	20mm	40mm	50mm	60mm	70mm
90 x45	1.6m	1.48m	1.44m	1.39m	1.35m
140 x 45	2.5m	2.30m	2.25m	2.16m	2.10m
190 x45	3.4m	3.07m	3.00m	2.90m	2.81m
240 x45	4.3m	3.95m	3.85m	3.71m	3.6m
290 x45	5.2m	4.79m	4.66m	4.48m	4.35m

Table 2: Joist spans 2.5kPa, 2.7kN

2.5kPa, 2.7kN floor load SG8 Wet in service, Joist Centres @ 400mm crs					
Floor Joist Size	Paver or Natural Stone Thickness				
(mm x mm)	20mm	40mm	50mm	60mm	70mm
90 x45	1.45m	1.35m	1.30m	1.25m	1.20m
140 x 45	2.25m	2.10m	2.05m	2.00m	1.95m
190 x45	3.00m	2.80m	2.75m	2.70m	2.60m
240 x45	3.50m	3.40m	3.35m	3.25m	3.15m
290 x45	4.00m	3.80m	3.75m	3.55m	3.50m

Table 3: Joist spans 3.0kPa, 3.5kN

3.0kPa, 3.5kN floor load SG8 Wet in service, Joist Centres @ 400mm crs					
Floor Joist Size	Paver or Natural Stone Thickness				
(mm x mm)	20mm	40mm	50mm	60mm	70mm
90 x45	1.30m	1.25m	1.20m	1.15m	1.10m
140 x 45	2.05m	1.95m	1.90m	1.85m	1.80m
190 x45	2.75m	2.65m	2.60m	2.50m	2.45m
240 x45	3.35m	3.20m	3.15m	3.05m	3.00m
290 x45	3.75m	3.60m	3.55m	3.45m	3.40m

Table 4: Joist spans 4.0kPa, 4.5kN

4.0kPa, 4.5kN floor load SG8 Wet in service, Joist Centres @ 400mm crs					
Floor Joist Size	Paver or Natural Stone Thickness				
(mm x mm)	20mm	40mm	50mm	60mm	70mm
90 x45	1.15m	1.10m	1.05m	1.00m	0.95m
140 x 45	1.80m	1.60m	1.55m	1.50m	1.45m
190 x45	2.45m	2.35m	2.30m	2.20m	2.15m
240 x45	3.00m	2.85m	2.80m	2.70m	2.65m
290 x45	3.40m	3.25m	3.20m	3.10m	3.05m

As an independent design professional, I BELIEVE ON REASONABLE GROUNDS that are subject to all proprietary products meeting their performance specification requirements, and the joists are fixed as per NZS3604 with the standard components and installation instructions according to which the structure is proposed to be constructed, comply with the relevant provisions of the building code.

I am covered by a current Professional Indemnity Insurance policy to a minimum value of \$200,000.00. We understand this statement may be forwarded to the Territorial Authority.

Rodney Stokes | Principal Structural Engineer

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