

CERTIFICATE OF CONFORMITY

This product Certificate is issued under Section 269 of the Building Act 2004 for:

Katana Piles 80kN, 100kN & 150kN Series



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Product Description
Katana Piles 80kN, 100kN & 150kN Series (Katana piles) are steel screw piles with capacities of 80kN, 100 kN and 150 kN utilising a proprietary designed screw thread and cutting comb.
Product purpose and use
<p>Katana piles transfer building loads beneath concrete slab further down from the surface to a subsurface layer or a range of depths. Common reasons for specifying screw piles are very large design loads, a poor soil at shallow depth, or site constraints like property lines. The placement and size of piles is dependent of the engineering design and geotechnical information for each site</p> <p>Katana piles can be used on:</p> <ul style="list-style-type: none"> slab-on-ground floors with occupancy loading up to 3kPa with a maximum dimension of 24m either way between free joints, or between free joints and slab edges. or foundations subject to specific engineering design (SED).
Certificate holder
Patented Foundations Pty Ltd, 37 Gravel Pit Road, Darra QLD 4076 Tel: +61 (0)412 422 758

CodeMark Certification Body		18/03/2019	10/12/2019	18/03/2022	GM-CM30097-Rev C
Global-Mark Pty Ltd, Suite 4.07, 32 Delhi Road, North Ryde NSW 2113, Australia Tel: +61 (0)2 9886 0222 www.Global-Mark.com.au	Herve Michoux Managing Director	Date of issue	Last update	Date of next re-certification	Certificate Number

The purpose of construction site audits is to confirm the practicability of installing the product; and to confirm the appropriateness and accuracy of installation instructions. In issuing this certificate, Global-Mark has relied on the independent expert and/or laboratory advise or reports. This certificate is issued by Global-Mark Pty Limited, an independent certification body accredited by the product certification accreditation body (JAS-ANZ) appointed by the Chief Executive of the Ministry of Business Innovation and Employment under the Building Act 2004. The Ministry of Business Innovation and Employment does not in any way warrant, guarantee, or represent that the building method or product the subject of this certificate conforms with the New Zealand Building Code, nor accept any liability arising out of the use of the building method or product. The Ministry of Business Innovation and Employment disclaims, to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages, and costs arising as a result of the use of the building method(s) or product(s) referred to in this certificate. This Certificate may only be reproduced in its entirety.

It is advised to check that this Certificate of Conformity is currently valid and not withdrawn, suspended or superseded by a later issue by referring to the Ministry of Business Innovation and Employment website, <http://www.mbie.govt.nz/>
New Zealand Building Code (NZBC) references the Building Code in force at the time of issuing the product certificate.
Certificate holder will notify Global-Mark Pty Ltd in accordance with Regulation 15 of the Building (Product Certification) Regulations 2008

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Compliance with the New Zealand Building Code (NZBC):

The Katana piles if designed and installed in accordance with this Certificate, will meet the following provisions of the NZBC:

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2, B1.3.4 (b), (c), (d), (e) for the relevant physical conditions of B1.3.3 (a), (b), (c), (d), (e), (f), (g), (h), (l), (m), (n) and (q),

Clause B2 DURABILITY: Performance B2.3.1 (a),

Subject to the following conditions and limitations:

- 1) When used in soils that have an exposure classification "Moderate" or "Severe" as defined by AS2159:2009 including amendment 1 and Supplement 1-1996 (R2018), the wall thickness and sealing of the Katana piles must be in accordance to Katana Screw Pile Corrosion Review on Void Slab System - RLH:VLK:213306 –(8 may 2013)
- 2) The Katana piles are not to be used in soils that have an exposure classification "Very severe" as defined by AS2159:2009 including amendment 1 and Supplement 1-1996 (R2018)
- 3) Not to be used in saturated sands subjected to liquefaction during earthquake loading and sensitive clays that have a rapid decrease in undrained shear strength once peak strength has been reached.
- 4) Piles filled with concrete are excluded.
- 5) Only materials identified in the Katana Foundations Detailed Product Statement (Version 5.1 dated 16/10/2018) shall be used. Substitutions are not allowed and fall outside the scope of certification.

Design limitations

- 6) The location, diameter, thickness, depth of the piles and on-site rapid test requirements (number of pile and load) is to be specified by a chartered engineer and:
 - a) be based on the site-specific geotechnical study carried out by chartered geotechnical engineer to the depth of piles establishing as a base the minimum;
 - i) Soil type and strength parameters (i.e. undrained shear strength, bearing capacity (cohesive or granular))
 - ii) Soil pH levels
 - iii) Chloride concentrations (in soil and in groundwater)
 - iv) Resistivity
 - v) Permeability of soils
 - b) for the applicable loads defined in accordance to AS/NZS1170 series of standard including (referenced as AS/NZS1170 set):
 - c) All amendments published at the time of issuance of this certificate
 - d) NZS1170.5:2004 including amendment 1.
 - e) in accordance with the following set of documents referenced as the Applicable Technical Documentation:
 - i) AS2159:2009 including amendment 1 and Supplement 1-1996 (R2018); and
 - ii) AS 2870 -2011; and
 - iii) IPENZ Practice Note 28: Screw Piles: Guidelines for Design, Construction an Installation ISSN 1176-0907 October 2015, and
 - iv) Earthquake geotechnical engineering practice: Module 4: Earthquake resistant foundation design

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November 2016 revision 0, and

- v) Katana Foundations Detailed Product Statement (Version 5.1 dated 16/10/2018); and
- vi) Katana Foundations Product Guide (Version 2.0 dated 15/10/2018)
- vii) Katana Foundations Installation Manual (Version 4 dated 7th of February 2019) and
- viii) Katana Screw Piles- Guidelines for Design Flood Loads (Version 2.0 dated 19/10/2018) and
- ix) Either
 - a) Basic Helical Screw Pile Design dated 21/02/2005 or
 - b) STA Consulting Engineers - Screw pile calculation Version 3 28/11/2018

Installation limitations

- 7) Installation and, if required, a site testing to be carried out in accordance with Applicable Technical Documentation by a Patented Foundation Pty Ltd approved person
- 8) When required by the chartered engineer during the product specification, a rapid site test as defined in the Applicable Technical documentation must be undertaken on the number of pile and load defined by the designing engineer to validate and verify the performance achieved by the piles.
- 9) A rapid site test as defined in the Applicable Technical documentation on a discrete number of piles must be undertaken for each project to validate and verify the performance achieved by the piles.
- 10) Installation documentation as required by the Applicable Technical Documentation shall be provided to the certifying Engineer including a declaration that the Katana Piles are
 - a) Installed in accordance with the Applicable Technical Specification; and,
 - b) Within the scope, conditions and limitation of this Certificate; and if test has been undertaken,
 - c) Achieved the performance level expected as demonstrated by the rapid site test.

End of Document"