



Certificate of Conformity



Global-Mark Pty Ltd,
Suite 4.07, 32 Delhi Rd
North Ryde NSW 2113
Australia

Tel: +61 2 9886 0222

www.Global-Mark.com.au

Certificate Holder:

Patented Foundations
Pty Ltd
37 Gravel Pit Road
Darra QLD 4076

Tel: +61 412 422 578

Certificate number: CM 30096 Rev3

THIS IS TO CERTIFY THAT

KATANA Piles 80 kN, 100 kN & 150 kN Series

Type and/or use of product:

KATANA Piles 80kN, 100kN & 150 kN Series (KATANA piles) are used in Class 1 & 10 buildings to transfer building loads beneath residential concrete slabs from the surface to a subsurface layer for 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 on the engineering design and geotechnical information for each site

Description of product:

KATANA piles are steel screw piles with capacities of 80kn, 100 kN and 150 kN utilising a proprietary designed screw thread and cutting comb.
KATANA piles are available in lengths of 1 to 4 metres, with extension, connector and capping accessories available.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S)

BCA 2019 + A1

	Volume One including Amendment 1	Volume Two including Amendment 1	
Performance Requirement(s)		P2.1.1	Structural stability and resistance
		P2.1.2	Buildings in flood areas
		P2.2.3	Rising damp
Deemed-to-Satisfy Provision(s):			
State or territory variation(s):		NSW P2.2.3	Rising damp

Scope of certification: The CodeMark Scheme is a building product certification scheme. The rules of the Scheme are available at the ABCB website www.abcb.gov.au. This Certificate of Conformity is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed against have been met. The responsibility for the product performance and its fitness for the intended use remain with the certificate holder. The certification is not transferrable to a manufacturer not listed on Appendix A of this certificate.

Disclaimer: The Scheme Owner, Scheme Administrator and Scheme Accreditation Body do not make any representations, warranties or guarantees, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; and the Scheme Owner, Scheme Administrator and Scheme Accreditation Body disclaim 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 product(s) referred to in this certificate.

The purpose of Global-Mark **construction site audits** is to confirm the practicability of installing the product; and to confirm the appropriateness and accuracy of installation instructions. In placing the **CodeMark mark** on the product/system, the certificate holder makes a declaration of compliance with the certification standard(s) and confirms that the product is identical to the product certified herein. In issuing this Certificate of Approval Global-Mark has relied on the **expertise of external bodies** (laboratories, and technical experts).

Herve Michoux
Global-Mark Managing Director

Peter Gardner
Unrestricted Building Certifier

Date of issue: 10/11/2022

Date of expiry: 10/11/2025



				SA P2.2.3	Rising damp
SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B					
Limitations and conditions:					Building classifications:
General Limited to residential construction as outlined within AS2870:2011 'Residential slabs and footings					1 and 10 a
Volume 2 - P2.1.1 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 with Katana Screw Pile Corrosion Review on Void Slab System - RLH:VLK:213306 –(8 May 2013).					1 and 10 a
Volume 2 - P2.1.1 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).					1 and 10 a
Volume 2 - P2.1.1 & P2.2.3 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.					1 and 10 a
Volume 2 - P2.1.1 Piles filled with concrete are excluded.					1 and 10 a
Volume 2 - P2.1.1 & P2.2.3 Only materials identified in the Katana Foundations Detailed Product Statement (Version 5.3 dated 01/06/2019) shall be used. Substitutions are not allowed and fall outside the scope of certification.					1 and 10 a
Volume 2 - P2.1.2 P2.1.2 does not apply in Queensland. In Queensland, Building work in designated flood hazard areas is regulated by the Building Act 1975 and Development Code 3.5 – Construction of buildings in flood hazard areas. Compliance evaluation to these documents sits outside the scope of the CodeMark scheme rules.					1 and 10 a
Volume 2 - P2.1.2 P2.1.2 does not apply in South Australia.					1 and 10 a

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

Refer to page 1 .

A2 Description of product

Refer to page 1.

KATANA Piles are designed in accordance with AS2159:2009 including amendment 1 and Supplement 1-1996 (R2018) to carry 80 kN, 100 kN or 150 kN safe working loads along with any additional loads due to installation misalignment, soil movement or pile settlement if applicable.

The KATANA pile consisting of pile shaft and bearing plate made of AS4100-1998 (R2016) compliant steel and are manufactured in accordance to AS/NZS 1554.1:2014 including amendment 1 and 2 to the manufacturing tolerances specified in AS/NZS1163:2016 including amendment 1. The piles are supplied at standard lengths including standard extensions with accessories as specified in the Katana Foundations Detailed Product Statement (Version 5.3 dated 01/06/2019), KATANA Foundations-Pile Product Guide (CODEMARK - Pile Products only) (v 20/09/2022) and KATANA Foundations-Attachment Product Guide (CODEMARK - Attachment Products only) (v 29/09/2022)

A3 Product specification

The location, diameter, thickness, depth of the piles and on-site rapid uplift test requirements (number of piles and load) is to be specified by a chartered engineer and:

- 1) 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;
 - a) Soil type and strength parameters (i.e. undrained shear strength, bearing capacity (cohesive or granular))
 - b) Soil pH levels
 - c) Chloride concentrations (in soil and in groundwater)
 - d) Resistivity
 - e) Permeability of soils
- 2) for the applicable loads defined in accordance to AS/NZS1170 series of standard including (referenced as AS/NZS1170 set) including all amendments published at the time of issuance of this certificate
- 3) in accordance with the following set of documents referenced as the applicable Technical Documentation:
 - a) AS2159:2009 including amendment 1 and Supplement 1-1996 (R2018) and
 - b) AS 2870 – 2011 and
 - c) Katana Foundations Detailed Product Statement (Version 5.3 dated 01/06/2019) and
 - d) KATANA Foundations Performance Guide (V 16/08/2022)
 - e) KATANA Foundations-Pile Product Guide (CODEMARK - Pile Products only) (v 20/09/2022) and
 - f) KATANA Foundations-Attachment Product Guide (CODEMARK - Attachment Products only) (v 29/09/2022) and
 - g) Katana Foundations Installation Manual (Version 4 dated 07/02/2019) and
 - h) Katana Screw Piles- Guidelines for Design Flood Loads (Version 2.0 dated 19/10/2018) and
 - i) Either
 - i) Basic Helical Screw Pile Design dated 21/02/2005 or
 - ii) STA Consulting Engineers – Screw pile calculation Version 3 dated 28/11/2018



Certificate of Conformity

A4 Manufacturer and manufacturing plant(s)

Patented Foundations Pty Ltd
37 Gravel Pit Road
Darra QLD 4076

Stoddart Manufacturing
39 Forest Way
Karawatha QLD 4117

A5 Installation requirements

1. Installation to be carried out in accordance with applicable Technical Documentation (refer Appendix B2) by a Patented Foundation Pty Ltd approved person.
2. Site testing:
 - a. A rapid uplift test shall be conducted in accordance with KATANA Foundations Performance Guide (v 16/08/2022), on a discrete number of piles for each project, unless not suitable due to depth limitations. Rapid uplift tests are used to validate and verify the performance achieved by the piles, and
 - b. When required by the designing engineer, a load test in accordance with AS2159:2009 including amendment 1 and Supplement 1-1996 (R2018) must be undertaken on the number of piles and loads defined by the designing engineer to validate and verify the performance achieved by the piles.
3. 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
 - c. achieved the performance level expected as demonstrated by the site test(s).

A6 Other relevant technical data

Any referenced documents within the technical literature identified in Appendices A3, A5 & B2.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

The following assessment methods have been used to determine compliance with NCC 2019 including Amendment 1:

Code Clause	Assessment Method(s)	Evidence of suitability	Evidence reference in B2
BCA Volume 2 - P2.1.1	A2.2.(2) (a), (c) & (d)	A5.2(1) (e) & (f) – Expert judgement & other form of documentary evidence	Item 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 & 11
BCA Volume 2 - P2.1.2	A2.2.(2) (a), (c) & (d)	A5.2(1) (e) & (f) – Expert judgement & other form of documentary evidence	Item 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 & 11
BCA Volume 2 - P2.2.3	A2.2.(2) (a), (c) & (d)	A5.2(1) (e) & (f) – Expert judgement & other form of documentary evidence	Item 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 & 11
BCA Volume 2 - NSW P2.2.3	A2.2.(2) (a), (c) & (d)	A5.2(1) (e) & (f) – Expert judgement & other form of documentary evidence	Item 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 & 11
BCA Volume 2 - SA P2.2.3	A2.2.(2) (a), (c) & (d)	A5.2(1) (e) & (f) – Expert judgement & other form of documentary evidence	Item 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 & 11

B2 Reports

The following reports have been used as evidence to determine compliance with NCC 2019 including Amendment 1:

Ref	Author	Reference	Date	Description	NATA Registration
1	KATANA Foundations	KATANA Pile Installation Manual - V4	7 Feb 2019	Product Installation Manual	-
2	KATANA Foundations	Detailed Product Statement - V5.3	1 Jun 2019	Product Technical Statement	-
3	KATANA Foundations	Katana Screw Pile Performance Guide	16 Aug 2022	Technical design, specification, installation and compliance information for architects, engineers, builders, building surveyors and end-users	-
4	STA Consulting Engineers	KATANA Foundations-Pile Product Guide (CODEMARK - Pile Products only)	20 Sep 2022	Product Technical Statement	-
5	STA Consulting Engineers	KATANA Foundations-Attachment Product Guide (CODEMARK - Attachment Products only)	29 Sep 2022	Product Technical Statement	-
6	Gilmore Engineers (e3k)	RLH:VLK:213306	8 May 2013	Product Durability Review	-
7	Gilmore Engineers (e3k)	RLH:VLK:213304	2 Apr 2013	Material Specification	-
8	KATANA Foundations	KATANA Screw Piles Guidelines for Design Flood Loads - V2.0	19 Oct 2018	Product Engineering Guidelines	-
9	STA Consulting Engineers	Screw Pile Capacity Calculation worksheet - V3	28 Nov 2018	Product Capacity Calculation Sheet	-
10	Stoddart Manufacturing	Screw Pier and Connectors Material Specifications	23 Oct 2018	Material Specification	-
11	Earth Contact Products	Basic Helical Screw Pile Design	21 Feb 2005	Product Design Guidelines	-

The Certificate Holder has chosen not to make the above identified evidence of compliance publicly available, due to the documents being considered commercial in confidence.

End of Certificate