

# STOPDIGGING! GROUND SCREW SYSTEM

## FOR LIGHTWEIGHT STRUCTURES NOT REQUIRING SPECIFIC DESIGN

### PURPOSE

The STOPDIGGING! ground screw system (ground screws) is a proprietary foundation, to support tensile, lateral and compressive loads system, intended for use as a substitute for traditional foundation piles and strip footings as defined in NZS 3604:2011 for lightweight buildings, decks and carports. For specifically designed foundations systems refer to STOPDIGGING! Ground Screw System pass™.

It is also suitable for use as a foundation system for hoardings, fencing, posts for signs or street lighting, uplift anchors for scaffold, where used with shrink-wrap envelope enclosures, and ground mounted, solar PV panel racking systems.

### EXPLANATION

The ground screws are made of steel that complies with ISO630 Fe360A – High Tensile Steel for Structural Purposes and are manufactured with a hot-dipped galvanised coating that achieves an average of 125 µm zinc cover. They are classified as category HDG900 (900 g/m²).

Ground screw are supplied in various screw diameters with extensions, adapters, and connection brackets. Specification of diameter, adapter and connection brackets are determined by soil conditions and fixing requirements. The ground screws are reusable and recyclable.

The ground screws are mechanically installed into soil to a depth at which the required resistance is achieved. It is suitable for use most locations, including expansive soil types and locations where frost heave could be an issue.

Ground screws can be installed without disturbance or damage to the ground, and concrete is not required.



For further assistance please contact:

☎ 09 393 5528

✉ info@stopdigging.co.nz

🌐 [www.stopdigging.co.nz](http://www.stopdigging.co.nz)



### SCOPE AND LIMITATIONS OF USE

Scope	Limitations
<b>Location</b>	
In all soil and ground conditions.	<ul style="list-style-type: none"> <li>› Soil type is to have pH &gt; 4 and soil resistivity &lt; 1000, ohms-cm.</li> <li>› Where installed on sloping ground, the maximum above ground height of the ground screw must not exceed 900 mm.</li> </ul>
In all wind and earthquake zones as defined in NZS 3604: 2011.	
In all exposure zones in accordance with NZS 3604:2011. D. Shelter to protect.	<ul style="list-style-type: none"> <li>› Where used in exposure zone D, the above ground portion of the ground screws must be enclosed so they are not subject to exposure to airborne salts or rain wetting.</li> </ul>
<b>Building</b>	
All buildings.	<ul style="list-style-type: none"> <li>› Roof mass must not exceed 20kg/m²</li> <li>› Wall cladding mass must not exceed 30kg/m²</li> <li>› Maximum floor load of 1.5 kPa</li> <li>› Maximum deck load at ground level of 2.0 kPa</li> <li>› Maximum snow load 1 KPa</li> </ul>

### USEFUL INFORMATION

For information on the design, installation and maintenance of the STOPDIGGING! ground screw system and for our warranty refer to [www.stopdigging.co.nz](http://www.stopdigging.co.nz).

### OTHER CERTIFICATIONS AND APPROVALS HELD BY THE MANUFACTURER

- › a3cert. [10/03/2020] ISO 9001:2015. Certificate number 20152. Issued to Sluta Gräv AB.
- › Shandong Zhong Xing Electric Tools Co. Ltd. [07/04/2021] EN 55014-1:2006/A2:2011, EN 55014-2:1997/A2:2008, EN60335-1:2012. Certificate of Compliance. Issued by ISET S.R.L.
- › Qingdao Wangbaoqiang Industry Co. Ltd. [08/07/2015] Factory Production Control Certificate. Issued by UDEM International Certification.

## CONDITIONS OF USE

Following installation, a completed record of installation must be provided.

## PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all STOPDIGGING! requirements, the STOPDIGGING! ground screw system will comply with or contribute to compliance with the following performance claims:

N.Z. Building Code clauses	BASIS OF COMPLIANCE <sup>1</sup>	
	Compliance statement	Demonstrated by
<b>B1 Structure</b> B1.3.1 B1.3.2 B1.3.3 (a), (b), (d), (f), (g), (h), (m) and (q) B1.3.4 (a, b, c, d, e)	<i>STOPDIGGING! ground screws</i> ALTERNATIVE SOLUTION  <i>Soil characteristics</i> ACCEPTABLE SOLUTION	<ul style="list-style-type: none"> <li>› Tension and compressive testing for load bearing capacity [WSP Opus, 23/07/2018].</li> <li>› Manufactured to meet ISO 630 Fe360A.</li> <li>› Compliance with B1/AS1 for soil characteristics (established in accordance with section 3 of NZS 3604:2011).</li> </ul>
<b>B2 Durability</b> B2.3.1 (a) B2.3.2 (a)	VERIFICATION METHOD B2/VM1	<ul style="list-style-type: none"> <li>› Coating is hot-dipped galvanised and achieves an average of 125 µm zinc cover. Service life assessed in accordance with AS/NZS 2041.1:2011 for metal loss rates based on soil pH levels and soil resistivity ranges [Cook Costello, 07/08/2020].</li> </ul>
<b>F2 Hazardous Building Materials</b> F2.3.1	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> <li>› Materials used are referenced in Acceptable Solution B2/AS1.</li> </ul>

1. The Compliance Statement is the pass holder's statement that they have met their obligations under s14G(2) of the Building Act 2004.

## SOURCES OF INFORMATION

- › Cook Costello. [07/08/2020]. *STOPDIGGING! Ground Screw Specification Revision 2*. Project Number 13759.
- › WSP Opus. [23/07/2018] *Ground Screw Load Testing*. Test Report, Ref: I-LA399.00.
- › Galvanizing Association NZ. [n.d.] *An introduction to AS/NZS 2312.2:2014*. Retrieved from [https://www.galvanizing.org.nz/docs/An\\_Introduction\\_to\\_New\\_Standards.pdf](https://www.galvanizing.org.nz/docs/An_Introduction_to_New_Standards.pdf). [Accessed 16/3/2020].
- › Material Grades. [8/2/13] *ISO 630 Structural Billet Fe-430 Steel*. Retrieved from <https://www.materialgrades.com/iso-630-structural-billet-fe-430-steel-773.html>. [Accessed 16/03/2020].



**VERSION:**  
.....

**DATE:**  
.....

Note: Uncontrolled in printed format.

**NAME:**  
.....

Jude Hickson

**POSITION:**  
.....

Managing Director

Signed on behalf of STOPDIGGING!:

By signing this pass™ the signatory confirms that, in respect of the subject of this pass™, the company has met their s14G obligations under the Building Act 2004.



**STOPDIGGING!, PO Box 71, Orewa 0946 > info@stopdigging.co.nz > 09 393 5528 > www.stopdigging.co.nz**

This Product Assurance Supplier Statement (pass™) has been prepared by TBB in accordance with MBIE PTS guidelines and the recommendations of s9.2, Determination No. 2019-011 (issued 12 April 2019). TBB is ISO9001:2016 certified. Copyright © 2017, The Building Business Limited (TBB). All rights reserved.