

Installation and Assembly Guidelines

Revision Status: UK 3.1

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Revision	What's new?	Page	Date
3.1	More than half of the pages have been updated. This is due to in part new products and changed designs.	1-4, 7-8, 10-15, 20-22, 32-41	29/09/17

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1. Before you install

Important

The following statements must be carefully read and put into practise. Failure to do so may result in installation of faulty equipment or reinstallation of the site.

1. This installation manual is written in line with EN16630.
2. The installer should be in possession of the relevant product cards of which are required for the gym that is about to be installed.
3. The definitions and terms are displayed at the beginning of this document and should be read and understood prior to continuing this manual.
4. The forms provided for the installer (*Site Completion Form and Installer Job Details*) are required for every site and are to protect all parties in the case of a dispute. Completed forms **MUST** be copied and sent back to the TGO office.
5. It is expected that the installer performs a basic Quality Check on completion of the gym installation. A QC page can be found Page 40 of this document.
6. The 'General Guidelines' must be read thoroughly by the installer.
7. It is the installers responsibility to follow the plans providing. If the installer is unclear as to what has been asked of them, they should contact TGOGC on the number provided. Failure to do so may result in an incorrect installation and the installer may be required to rectify this at their own cost.
8. The installer is to check the equipment upon delivery and must report any defects immediately to TGOGC. Defects include any noticeable scratches, dents, breakages, etc. Upon signing for delivery, the installer is taking responsibility for the TGO products and any transit damages that may later be identified. The installer has the right to reject the delivery and report this back to TGOGC. Failing to do this will hold the installer responsible for costs required to rectify any damages.

9. All the installations illustrated throughout this manual are based on 'Normal Ground Conditions'. Please refer to the list of definitions for an understanding of this term.
10. The installer should read through the following checklist (*page 5*) and ensure that they have ticked all the boxes prior to installation.
11. Fitness equipment is not intended for installation in the immediate vicinity of children's playgrounds in accordance with EN16630
12. If the TGO gym is installed in connection with playground equipment on playgrounds or similar installations, they shall be separated from general playing activities by a sufficient distance, fencing or other structural measures.

Note 1:

The images throughout this document are for reference only and at no point should the installer scale from drawing.

Important:

Failure to notify The Great Outdoor Gym Company of product damages prior to installation may result in the installer taking liability for damages.

www.tgogc.com / +44 (0)1795 373301

The Old Dairy, Brogdale Farm, Brogdale Road, Faversham, Kent, ME13 8XZ, UK

Note: Overseas customers to contact their local TGOGC suppliers

2. TGO Checklist

Prior to installation of this new TGOGC gym, The installer must:

- Have read this copy of the 'TGO Installation and assembly guidelines (Recent revision)'.
- Have copies of the relevant product cards associated with the TGO gym to be installed.
- Have an installation team who are experienced and competent in ground-works and surveying surfaces to safely and efficiently install the TGO Gym.
- Check that the correct and relevant TGO gym installation drawing is in the installer's possession.
- The correct grade of concrete is to be used. This must achieve a compressive strength test of around C30 (ordered as C28/35) as specified later in this document.
- Ensure all TGOGC equipment is accounted for upon delivery, including loose fabrications, i.e. Handles, Platen, etc, and their fixings
- Ensure the installer is equipped with the necessary tools to complete this installation. Use of a *Security Pin Torx* and *Security Pin Hex* tool (8mm Pinned Hex security Drive for anchor installations) will be required for installation. Refer to page 6.



- Know whether the gym site is of a coastal specification (See definitions page 8), as these installations will require nonferrous metal tools as to not contaminate the fixings.
- Ensure all protective film is removed from signs before exposing to extended periods of sunlight.
- The TGO equipment has been checked upon delivery.



Note 1:

The installer should take note of the key below when using to installation diagrams. This key is repeated within this document.

Key:



Soil / Earth



Surfacing



Compacted road Stone (Type I)



Concrete C30 (Page 12)

3. TGO tool & fixing guide

Tools and fixings types:

The installer will be expected to be in the possession of and use the following tools, during the installation of a TGO gym.

Socket Wrench with a relevant adapter to accept the fixing bit pieces or

- Pin Hex Key Set of which must include
 - H80 8mm Pinned Hex Drive Bix
- Pin Torx Key set of which must include
 - T20 pinned security head (*torx*)
 - T25 pinned security head (*torx*)
 - T30 pinned security head (*torx*)
 - T35 pinned security head (*torx*)
 - T40 pinned security head (*torx*)
 - T45 pinned security head (*torx*)

It is unlikely that an installer will have to access a fixing that has loctite to secure it. However, in the event that this does occur please contact TGOGC (UK) or our overseas suppliers for details on how to access these fixings.

Note 1:

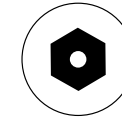
To merit coastal specifications, nonferrous coastal equivalent tools must be used on coastal installations.

Note 2:

The images shown to the right are representative and the size and style will change depending on the application for the fixing.



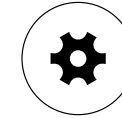
Socket Wrench



Pin Hex



Key
(Pin Torx or Hex)



Security Head
(Pin Torx)



Fixing bit piece
(Pin Torx or Hex)



Washer



Countersunk Pin
Hex



Kinmar Nut



Button pin hex
Bolt



Shear nut

4. TGO top plan example

This is an example of a top plan which an installer should be in possession of during any installation. This particular example is *(or something similar)* to that of which TGO will supply. These drawings will differ between suppliers, but the key criteria that should be included is highlighted below.

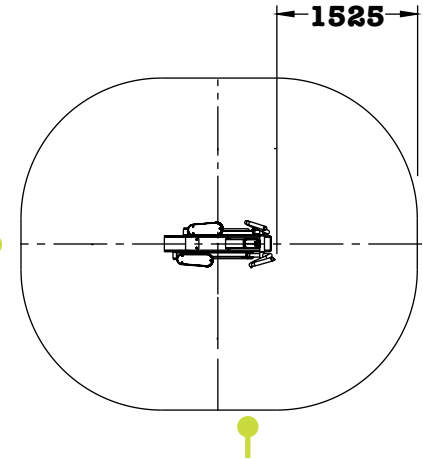
Drawings must honour the specified spacing between TGO equipment, as shown on the TGOGC Product cards. A 25mm tolerance is added to TGO installation drawings.

gym orientation and starting reference point for the installation should be available

Linked to the B.O.M, an isometric view of the gym is useful to help identify the gym pieces.

Important information to installers

Centre Lines are taken from the equipment base plates, which identify the centre lines of the anchors.

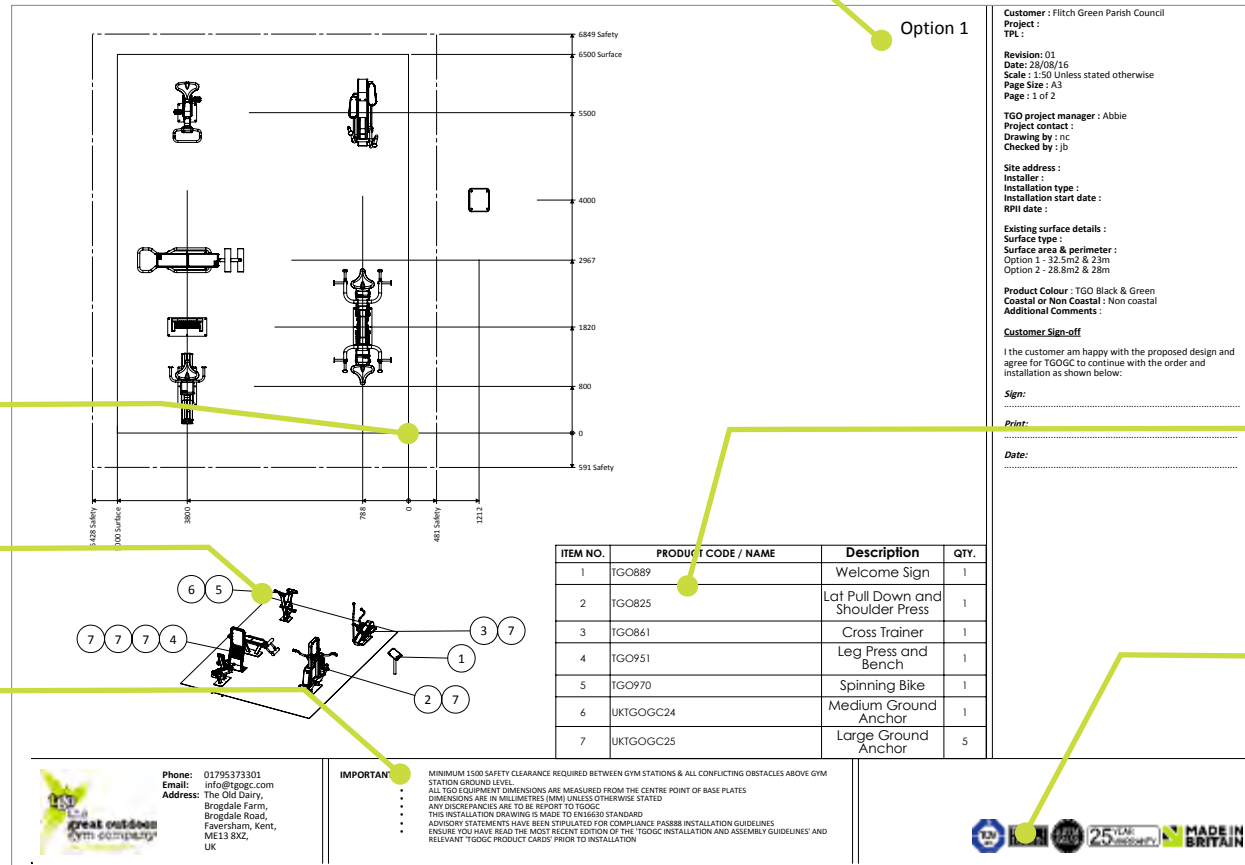


Drawings must honour the specified spacing between TGO equipment, as shown on the TGOGC Product cards. A 25mm tolerance is added to TGO installation drawings.

Dimensions are typically shown to the nearest millimetre, unless specified.

B.O.M - A Bill of materials stating all the equipment to be installed on site. The installer should refer to the product cards to ensure the correct anchor is being used.

TGOGC installations are compliant to EN16630.



5. Definitions of terms

The installer will find throughout this manual that The Great Outdoor Gym Company will refer to a variety of terms in their abbreviated form. Below are a list of these terms and their definitions.

1. TGO (TGOGC)

An abbreviation for 'The Great Outdoor Gym Company'

2. Normal Ground conditions

This refers to a 'greenfield site' or a 'hard standing' site; a well drained grass area for 'greenfield' or an existing concrete tennis court for 'hard standing'. This is subject to ground survey. Loose surfaces, such as sand, gravel, etc may require bespoke ground sockets (*at additional costs and lead time*).

3. Anchor Installation

A term TGO use whilst referring to an installation which involves a ground anchor and is commonly applied to installations within a 'greenfield' site, *i.e. not concrete*. Further details can be found under the anchor installations Section of this manual. Please refer to pages 22-27 for details regarding anchor installation.

4. Hard standing surface mount Installation

A term TGO use whilst referring to an installation that involves bolting directly down to a suitable existing hard surface, with no use of an anchor. The specific requirements for this are found under the hard standing installation section of this manual, see pages 28-31.

5. RPII

Stands for 'Register of Play Inspectors International' and it is an important inspection prior to the opening of a TGO gym, as part of TGO's policies.

6. EN16630

The European standard for general safety required for the manufacture, installation, inspection and maintenance of permanently installed, freely accessible outdoor fitness equipment.

7. Nonferrous

A group of metals which have an insignificant or no iron content and therefore will not rust. These metals can be used within a coastal environment and not be affected (*significantly*) by the natural elements.

10. Coastal Specification

TGO specify a site to need coastal upgraded gym equipment when within a 1km vicinity to a salt and moisture rich environment, such as the coast. Upgraded equipment and specialised (*nonferrous*) tools will be required in order to prevent rusting or rust contamination.

11. Energy Charge

This is the upgrade of a cardiovascular TGO gym piece to have the ability to electronically charge a mobile device through the use of USB sockets, found in the integrated Console. This equipment is identified by the product code and typically the energy equivalent comes in a TGO Silver and Green finish. For example 'TGO862 Energy Charge Cross Trainer' is the energy charge equivalent of the 'TGO861 Cross Trainer'. The installer should be aware of possible energy installations when quoting and studying installation drawings. This is especially the case with the energy Glow and Flow gyms installations, which will require the installation of cabling and conduit between units. Further details surrounding 'Energy Charge', 'Flow' and 'Glow' systems can be found in the 'TGOGC Energy Installation and Assembly Guidelines'.

12. Free fall height

This is a term to describe the maximum free falling height, from the bottom of users feet to the floor. Impact attenuating safer surfacing will need to be provided for certain TGO gym pieces. The 'free fall heights' for TGO gym pieces can be found on the TGOGC Product Cards.

6. TGOGC Product Range

The Great Outdoor Gym products mostly either use a large or a medium anchor for normal anchor installations conditions. There are some exceptions to this and these are **highlighted** in the following table. Use this table to identify the type of anchor required for each equipment piece in the TGO gym installation. Remember that it is common practise to have the ground anchors arrive to site prior to the equipment.

Key:
Fitness Range
Mini Range
Energy Range

Code	Name	Anchor Requirement	Conduit Requirement Y/N (Energy Gym)
TGO501	Single Pull Up Bar	Concrete pads	N
TGO502	Double Pull Up Bar	Concrete pads	N
TGO503	Triple Pull Up Bar	Concrete pads	N
TGO504	Parallel Bar	Concrete pads	N
TGO505	Overhead Ladder	Concrete pads	N
TGO510	Rig	Concrete pads	N
TGO701	Full Body Multi Gym	3 x Large	N
TGO702	Toning Multi Gym	3 x Large	N
TGO703	Cardio Multi Gym	2 x Large, 1 x Medium	N
TGO800	Dips and Leg Raise	1 x Large	N
TGO810	Pull Up And Assisted Pull Up	1 x Large	N
TGO825	Lat Pull Down and Shoulder Press	1 x Large	N
TGO835	Chest Press and Seated Row	1 x Large	N
TGO841	Plyometric Boxes	3 x Medium	N
TGO850	Bench	1 x Large	N
TGO861	Cross Trainer	1 x Large	N
TGO862	Energy Flow/Glow Cross Trainer	1 x Large	Y
TGO862	Energy Charge Cross Trainer	1 x Large	N

Note 1:

Conduit will be supplied with all energy Glow and Flow system installations. It shall not be required for Cardio Charge upgrade / installations.

Code	Name	Anchor Requirement	Conduit Requirement Y/N (Energy Gym)
TGO870	Leg Press	1 x Large	N
TGO891	Recumbent Bike	1 x Large	N
TGO892	Energy Flow/Glow Recumbent Bike	1 x Large	Y
TGO892	Energy Charge Recumbent Bike	1 x Large	N
TGO905	Triple Step Up	Concrete pads	N
TGO907	Hand Bike	1 x Medium	N
TGO908	Energy Flow/Glow Hand Bike	1 x Medium	Y
TGO908	Energy Charge Hand Bike	1 x Medium	N
TGO910	Oblique	1 x Large	N
TGO941	Treadmill and Oblique	1 x Large	N
TGO951	Leg Press and Bench	1 x Large	N
TGO970	Spinning Bike	1 x Medium	N
TGO971	Energy Flow/Glow Spinning Bike	1 x Medium	Y
TGO971	Energy Charge Spinning Bike	1 x Medium	N
TGO100	Energy Display Unit (EDU) Glow	1 x Large	Y
TGO101	Energy Display Unit (EDU) Flow	1 x Large	Y
TGO512	Lower Overhead Ladder	Concrete pads	N
TGO516	Lower Double Pull Up	Concrete pads	N
TGO517	Lower Parallel	Concrete pads	N
TGO871	Shortened Leg Press	1 x Large	N
TGO894	Shortened Recumbent Bike	1 x Large	N

Key:

Fitness Range
Mini Range
Energy Range

7. General Guidelines

IMPORTANT Guidelines to a TGOGC Installation

7.1 Anchor installation:

The range of TGOGC equipment has two main types of equipment installation. The first and most common type is using either a large (Page 22) or medium (Page 23) ground socket, which is set into a concrete foundation. The mini range will include the use of the small ground anchor (Page 24). To assist installation, the medium and large anchor include an opening in the top surface for accessing the level of concrete pour, as well as allowing for conduit and cabling to pass through. Some items have multiple bases, and the distances between these bases will be displayed on the TGO Gym installation drawing and 'TGOGC Product Cards' that the installer should be in possession of. All measurements are taken from the centre points of the base points.

7.2 Surface mount installation:

The second type of installation is a surface mount installation. Only in exceptional circumstances it is possible to surface mount the gym equipment. This option is only suitable if the client can substantiate that the intended location is suitable for the additional dynamic loading that TGOGC equipment will provide. Such a situation could conceivably be a concrete rooftop garden, cruise ship, portable show mounts or other engineered structure. Within this manual, the topic of surface installation covers a continuous surface of concrete and a new installation through the use of concrete pads. Please see the 'Definitions and Terms' (page 8 - 9) and relevant surface mount installation sections (pages 28 - 31) for further details surrounding this. In such a situation it is advised that the client is passed the potential loading figures for the equipment and they should be required to satisfy themselves that the structure is suitable.

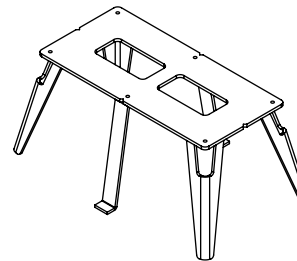
Most surfaces are adequate for gyms to be constructed on or have an additional surface applied to. Although gravel, sand or grit are particularly abrasive and may occasionally jam the equipment and will lead to rapid wear of paint and parts. Therefore such installations should be avoided.

7.3 Concrete and other guidelines:

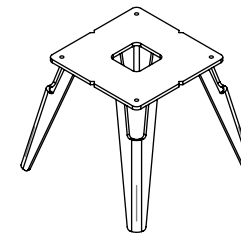
If any type of loose fill surface is intended bespoke ground sockets must be ordered (at additional cost) to replace the standard ones.

The concrete that should be used for all foundations should achieve a compressive strength test of around C30 (ordered as C28/35) which should be left to cure for at least seven days. Delivery notes should be retained as proof that this requirement has been met; random sampling may be required for contract compliance. C28/35 is an industry standard mix for engineering purposes, it is virtually impossible to replicate on site on a spot board or small mixer. Installers using this process will be challenged to prove the strength of the mix.

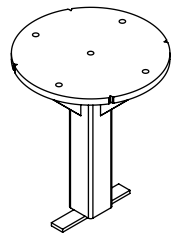
The available TGOGC anchors are illustrated below (Not to scale).



Large ground anchor



Medium ground anchor



Small ground anchor

Note 1:

Normal Concrete mixes available range; C8/10, C12/15, C16/20, C20/25, C25/30,

C28/35, C30/37, C32/40, C40/50, C50/60, C55/67, C60/75, C70/85, C90/105, C100/115
(local conditions may require adaption including sulphate or phosphate resistance).

Note 3:

International industries may use alternative codes for concrete grades. For example, Australia substitutes the 'C' for a 'G' in the above codes.

Note 4:

Installations outside of the UK will require confirmation and approval of the availability of a suitable engineering grade concrete mix.

The ground anchor system has been developed to safely disperse the energy applied to the equipment in use and to allow a safe removal of equipment for maintenance and for any replacements that might be needed.

The correct installation depth of ground sockets is identified for each type later on in this document. Here diagrams can be found to illustrate the anchor's relationship towards the surfacing. In installations where a foundation is poured into an existing hard surface, this method allows the concrete pour to finish flush with or below the top of the hole, preventing any float off and subsequent staining of the surrounding surface even in a sloped environment.

The recommended maximum slope to the finish surface in any one direction is 1:50

Note 5:

The concrete foundation sizes outlined in the manual are the minimum

recommended sizes. They have been specified through combined experiences for use in what should be regarded as 'normal firm' ground conditions (see soil table, page 16) and in areas where levels of potential vandalism is quite low. Where ground conditions are poor and where there is deemed a high likelihood of vandalism to the equipment, additional advice should be taken from a structural engineer to the required foundation type and sizes. In every case foundation excavations must be cleaned before pouring, have straight sides or under-cut sharp corners (as to help prevent roll out) and be free of standing water. Sites where a high or perched water table is found should be suitably drained before installation occurs; this is best achieved by the inclusion of land drains or temporarily by the creation of a sump pit and pumping.

Note 6:

Should you find that when excavating during installation that the ground conditions are poor or in any way of concern, the client should be informed and pad sizes need to be revised accordingly. Most contracts will have in place a clause covering unexpected ground conditions.

8. Selecting an Installation

Surfacing stages

What fixing solution should I choose for my gym?
Ground anchor or Surface Mount

Is the existing surface level grass (*under normal ground conditions - see soil table, page 16*) or good level tarmac?

In ground anchor - pages 22 - 27

Common TGOGC Surfacing Combination and their requirements

Grass Matting

- Grass Matts Only - Requires tuck in

Tarmac** onto Grass (New build)

- CAT scan area prior to excavation
- Dig Out
- Lay Geotextile membrane
- Type 1 road stone (*Min 100mm Depth, depending on Surfacing depth requirement*).
- PCC edging in place
- Compact Roadstone down to at least 60mm below the surface finish level*
- Tarmac 40mm Base, 20mm topping

Wetpour** onto Grass (New build)

- CAT scan area prior to excavation
- Dig Out
- Lay Geotextile membrane
- Type 1 Road Stone (*Min 100mm Depth, depending on Surfacing depth requirement*).
- PCC Edging in place
- EPDM Wetpour 40mm Depth

Is the existing surface 120mm of c30 high grade continuous concrete, beyond the extremities and fall zones of the pieces when clustered?

Surface mount - pages 28-31

Common TGOGC Surfacing Combination and their requirements

Wetpour** onto tarmac or concrete

- CAT scan
- Hard surface cut out with chase perimeter 120mm x 50mm deep.
- EPDM Wetpour (20mm Depth)
- May require a clean***

Tarmac** to existing hard standing surface

- 20mm Tarmac skim
- May require a clean, price on application***

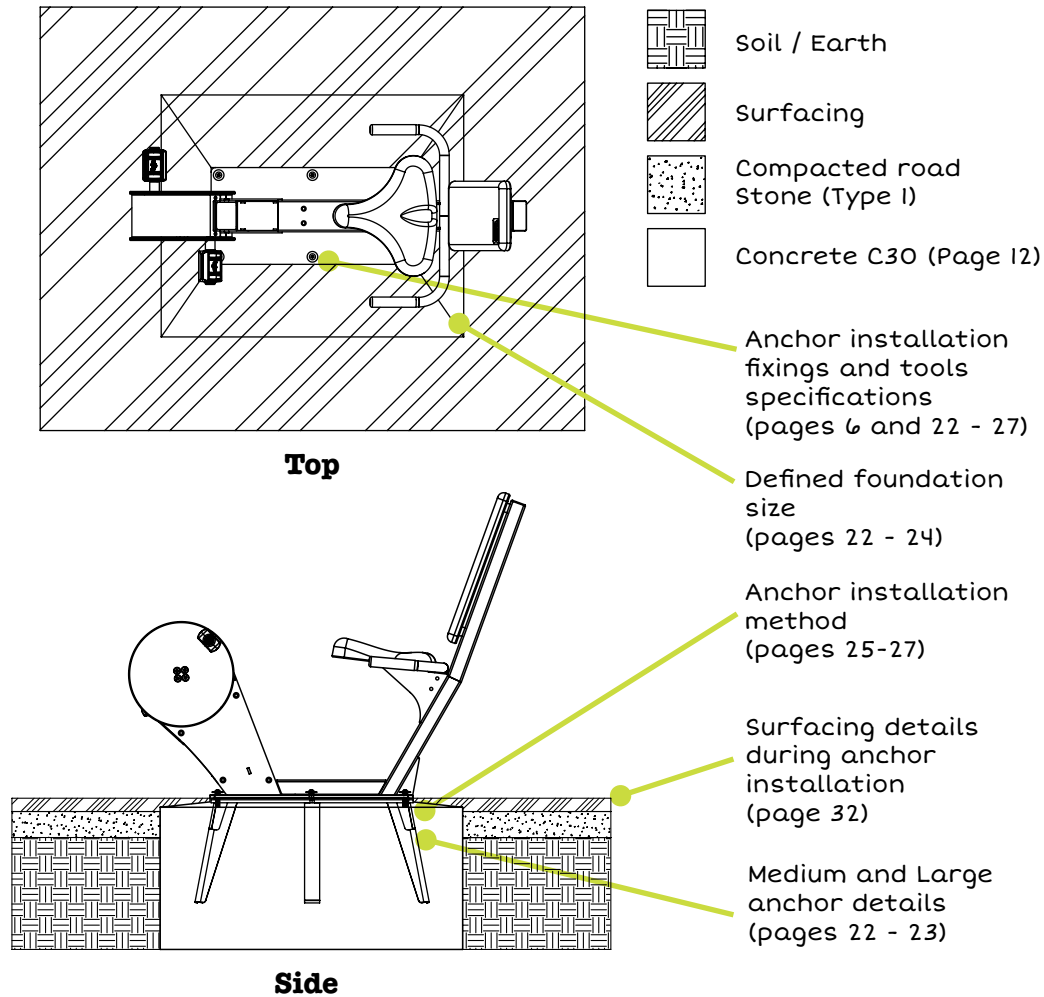
* This level is based on 40mm surfacing depth and should be adjusted in accordance with finished surfacing depth.

** Other Surfaces are available

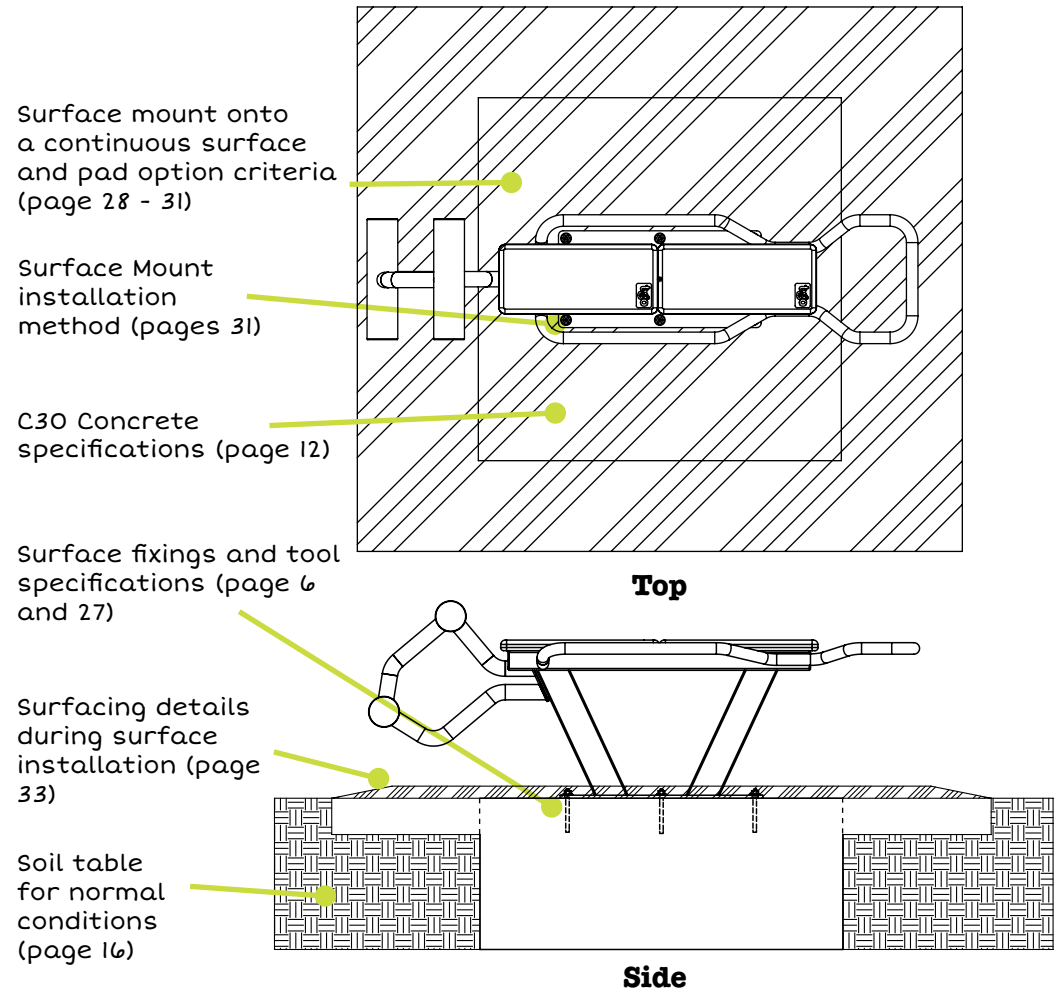
*** Price on application.

9. Overview of the installation Types

1.) Anchor Installation overview (page 22 - 27)



2.) Surface Mount installation overview (page 28 - 31)



10. Soil Table

Table showing typical soil types encountered on site (*types not listed should be assessed individually*):

Type of ground (<i>including engineered fill</i>)	Condition of ground	Field test applicable (<i>wet</i>) taken following removal of 150mm top soil	Suitability
Rock	Not inferior to sandstone, limestone or firm chalk	Requires a pneumatic or other mechanically operated pick for excavation	Highly suitable but may require additional cost for excavation
Gravel or sand	Medium dense	Requires pick for excavation, wooden peg 50mm square in cross section hard to drive beyond 150mm	Suitable
Clay or sandy clay	Stiff	Can be indented slightly by thumb	Suitable
Clay or sandy clay	Firm	Thumb makes impression easily	Suitable
Sand, silty sand clayey sand	Loose	Can be excavated with a spade, wooden peg 50mm square can be easily driven	Will require additional or alternative foundation
Silt, clay, sandy clay, silty clay	Soft	Finger pushed in up to 10mm	Will require additional or alternative foundation – assess the peripheral features such as curbing for requirements
Silt, clay, sandy clay, silty clay, shale, shingle or pebble	Very soft	Finger easily pushed in up to 25mm	Will require additional or alternative foundation – the peripheral features such as curbing and sub bases will require additional engineering for stabilization

11. General Guidelines

11.1 Site information

An example 'Installers Site Job Details' is available in this manual and should be completed for every site installed.

The installer is responsible for surveying the site, prior to breaking ground, for any buried services and is wholly responsible for reinstatement of the site. Information regarding the site should be provided by the client but not be taken as totally accurate or complete.

In situations where ground conditions are found to be other than those described by the client, there may be reasonable grounds for the client to accept an additional cost of the works.

In addition to this the installer is responsible for undertaking a full schedule of conditions of the site plus parking, compound (*any buildings used*) and access when the site is accepted.

On every occasion of leaving the site the required temporary security fencing (Heras) must be secured. At the end of every day of work a dated and timed digital photograph showing the site conditions and security of the site must be taken and sent to the installation manager.

On completion of the installation a site handover and schedule of conditions meeting is essential, during which a 'Completion Certificate' must be completed and faxed to the local office or sent to

info@tgogc.com (or your local TGOGC supplier).

Installation will not be considered as completed and therefore payments will not be processed unless this form is signed by the client and returned.

11.2 Scheduling

A programme of works should be completed by the installer prior to the start of the installation. All relevant parties should be notified when they are required, including deliveries, material suppliers, surfacing contractors and the post installation inspection. A completion date should be set with the client and all reasonable efforts should be made to meet that deadline.

Schedule of works time scales:

1. Schedule of conditions to be completed with client prior to any movement of vehicle or materials onto site.
2. Radio detection CAT scan findings to be clearly identified on the site.
3. Mark out site layout and levels from identified bench mark and setting out points.
4. Excavation of existing base to form new foundation for equipment
5. Excavation of the gym area in correspondence to the decided surface finish. This includes the depth of dig out for roadstone, conduit (*if required*) and surfacing. For surfaces requiring roadstone (*Type 1*), ensure comply with the surfacing suppliers specification and schedule appropriately.
6. Installation of ground sockets and anchors achieving a minimum of C30 concrete mix and should be used to the correct depths and sizes as specified in this manual.

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Note 1:

All ground anchors and bases must have level tops at equal heights when an item has multiple bases.

7. Allow appropriate time for the full curing of the C30 (or greater) concrete. This is down to installer discretion and if in doubt the installer should confer with the concrete supplier.
8. Assemble all units over the appropriate ground sockets/ fixings using the bolts or fixings provided.
9. If at any stage there is damaged concrete (i.e. frost damage) or if any of it has not mixed properly or cured fully or if fixtures or fittings are not as they should be the installer should immediately contact the installation manager.
10. Apply the impact attenuating surface or other surfacing (if required by the customer).
11. Complete reinstatements and touch ups to equipment.
12. Reconcile schedule of conditions with client and seek completion of sign off certificate.
13. Return snagging list.

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11.3 Completion

As each gym piece is installed and assembled, the full range of movement should be tested to ensure a smooth operation. All limiters should also be tested fully where fitted.

1. Check all the fittings are secure and that anti-tamper bolts and caps are properly closed.
2. Ensure that the correct signage has been properly fitted and is secure.
3. Ensure that any paint touch ups are done with the correct matching paint, prior to handover.
4. Ensure all cellophane used to protect the signage has been removed, ideally prior to installation as to prevent it baking to the signage.
5. Ensure that the light maintenance kit is handed over to the customer.

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Make sure that the handover meeting and post installation inspections are not scheduled too early and that all the detail of the installation has been addressed. Also ensure that the equipment, surfacing and any paths are clean and reinstatements are completed.

It is strongly advised that an independent surveyor signs off the gym, to ensure the gym is in accordance to EN16630. For UK only, please contact Newton Ford at

newton.ford@ntlworld.com

who can perform the inspection himself or help identify a suitable local surveyor. Abstracts from a RPII form can be found on page 19.



Play-IT POST INSTALLATION REPORT

FOR

The Great Outdoor Gym Co Ltd
Name of site here

Reference: P1223 / 0000 Inspection Date: 00 / 00 / 0000 Time: 00 : 00 Report: 00 / 00 / 0000



An independent assessment of the playground and equipment compiled by:

Play-IT

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Play-IT & Play-IT Inspectors are insured as required by the RPii membership criteria

Play-IT POST INSTALLATION REPORT

Report Introduction

This report identifies failures or findings by the relevant World (ISO), European (EN), British (BS), or Publicly Available Standard (PAS) clause number, enabling direct reference to the reason for the failure, with a note, giving the principles of that clause. Adventure playgrounds are not covered by these Standards or PASs and the publication 'Risk and safety in play' underpins the inspector's knowledge for such inspections.

Findings specific to PAS 30 & PAS 36 are being progressively incorporated. Other findings may be referred to as Play-IT Recommendations; these are generally extracted from or covered by NPFA TANs (Technical Advice Notes). The remaining finding type used is Maintenance Recommendations.

A risk assessment is provided (other than for post installation inspections) to assist the operator in determining the level of the hazard found. All risk assessments requiring immediate action are printed in red and all others indicate that the item can continue in use. TAN 47 (provided with this report) describes the risk assessment methodology.

CATEGORIES OF RISK USED IN REPORTS

Immediate	Action advised to be undertaken immediately i.e. today
High	May continue in use, action is necessary within 3 months
Moderate	May continue in use until finance is available to undertake necessary action
Low	May continue in use, no action required (NAR)

As seen within the photographs, probes are often used to demonstrate a failure. In addition to EN1176 specified probes, there are Play-IT 'pass/fail' gauges for crucial EN1176 dimensions. These have been developed to improve the efficiency and accuracy of our inspections by removing guesswork and inspection measurement errors that may otherwise easily occur.

After studying this report please consider whether it may be useful to forward relevant sections to your maintenance contractor.

Play-IT POST INSTALLATION REPORT

Inspection Findings

Item 01	Sports Equipment	Combination Chest Press & Rowing Machine
	Manufacturer	The Great Outdoor Gym Co Ltd
	Remaining Life Span	< 15 Years
	Age Range	N/A
	Accessible to Under 3s	N/A
	Surface	WETPOUR
	EN1176 & EN1177 / EN14974 / EN15312 / PAS888 / DIN79000	Meets the applicable standards
	Play-IT Recommendations	None
	Maintenance Recommendations	None



CERTIFICATE OF COMPLETION

2017 : Revision 01

Job Reference:

Client:

Site:

Date of Completion:

The required work has been completed in accordance with the Tender/Contract/Order and the installation has been completed to a satisfactory standard. The installation has been done in accordance with the TGOGC Installation and Assembly Guidelines, as issued prior to installation.

The site has been left in suitably clean and tidy condition

A schedule of conditions for the completed job has been reconciled with the schedule of conditions undertaken at the start of the works:

Signed:

Date Signed:

Print Name:

Position/Authorisation:

Contact No.

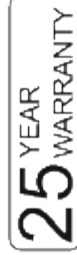
Contact Email:

This completed form should be faxed and/or emailed to The Great Outdoor Gym Company Ltd.

Email: maintenance@tgogc.com.

For Australia

Email: service@tgogc.com



INSTALLATION SNAGGING LIST

2017: Revision 01

Client:

Site:

Date of Completion:

Installation has been completed

Equipment is serviceable and has been inspected in compliance with PAS888

The equipment is functioning as expected

The equipment is free from scuffs, marks and labels

All wet material (paint, surfacing, etc) has dried

All Rubbish, skips and excess material has been removed from site

The site has been swept and surfacing left in a presentable condition

I the customer am satisfied with the installation and equipment

Note any equipment defects:

Note any site defects:

Signed:

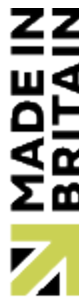
Date Signed:

Print Name:

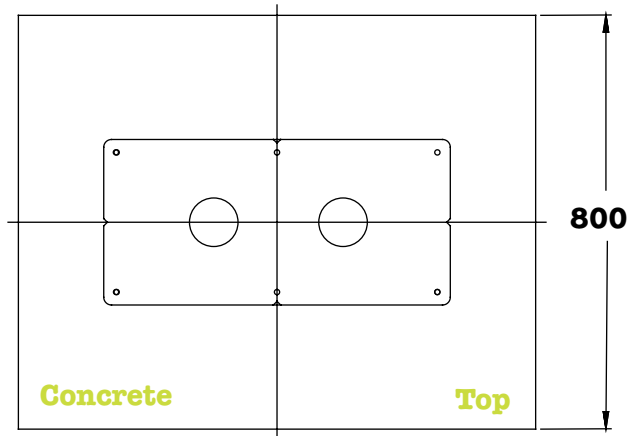
Contact No.

This completed form should be emailed to The
Great Outdoor Gym Company Ltd.

Email: maintenance@tgogc.com.



14. Large Anchor Installation



Greased fixings:
6x M12 Button Pin Hex
6x M12 Washers

Base Plate dimensions:
670mm Length
320mm Width

Tool:
8mm pinned hex security drive

Foundation and Ground Anchor at NORMAL conditions:

The dimensions given are the minimum requirement for regular ground conditions & may need to be amended for made up or soft ground.

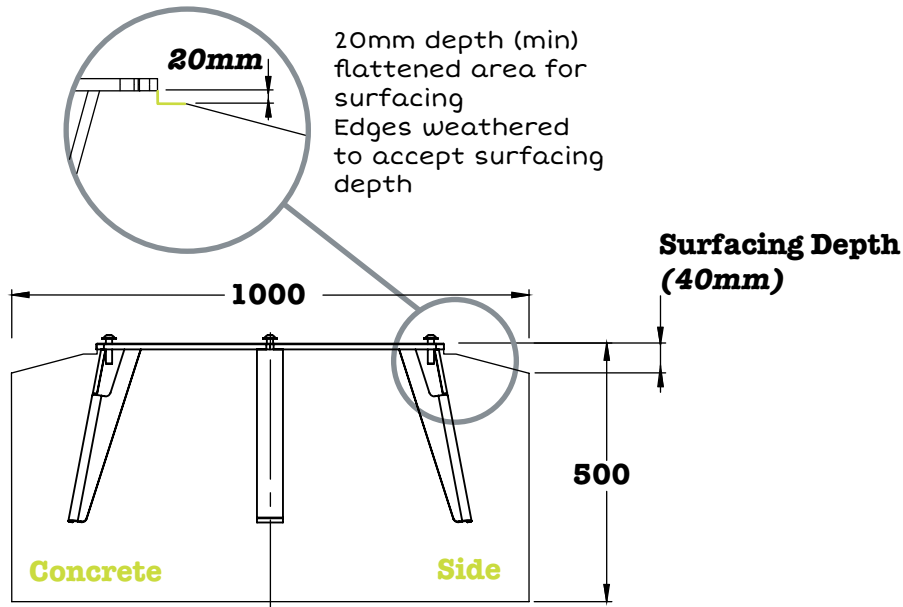
The TGOGC ground anchor is specially designed to dissipate energy from the equipment in use and stabilise the footing. The top surface of the ground socket must finish flush with the final finish surface level (*FFL*) of the site. This is now a common practise for TGO's equipment base plates and will allow for surfacing to finish flush with the top of the anchor's base plate. Consequently the installer will be required to weather down to the surfacing depth level (*typically 40mm, unless otherwise specified*). In order to apply a minimum thickness of wetpour, a 20mm flattened ridge will be required all around the anchor base plate.

IMPORTANT:

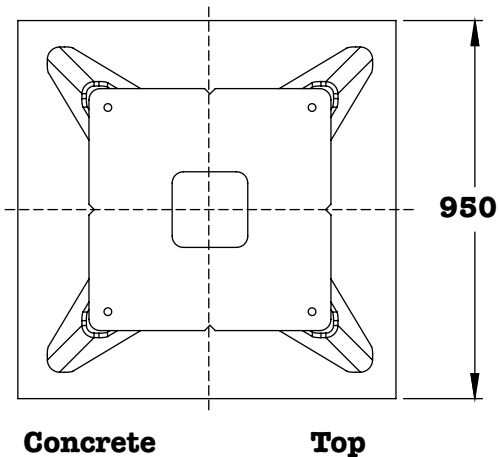
The concrete must completely fill the underside of the foundation. Use the two large holes provided in the top plate (see *left*) as a visual check.

IMPORTANT:

Check that all 6 fixing bolts are greased and fully screwed into each hole before concreting.



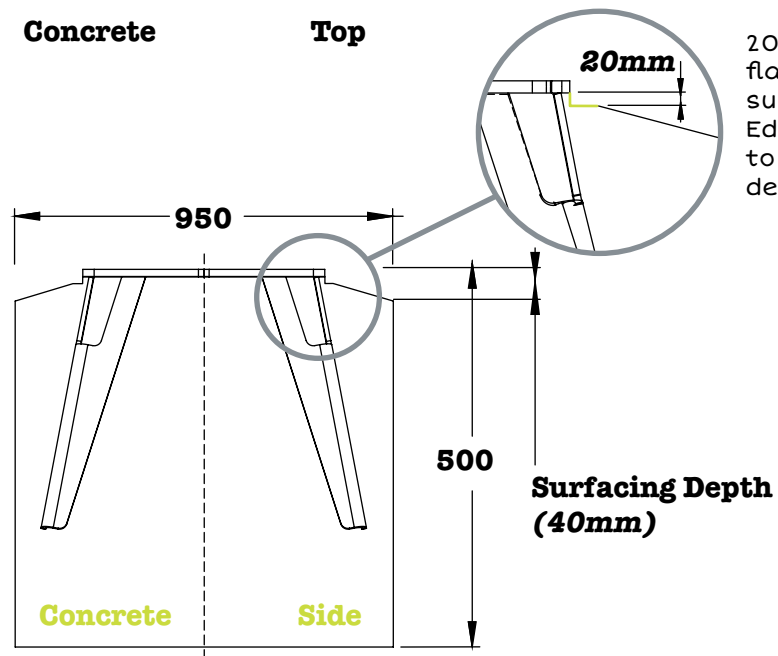
15. Medium Anchor Installation



Greased fixings:
4x M12 Button Pin Hex
4x M12 Washers

Base Plate dimensions:
320mm Length
320mm Width

Tool:
8mm pinned hex security
drive



Foundation and Ground Anchor at NORMAL conditions:

The dimensions given are the minimum requirement for regular ground conditions & may need to be amended for made up or soft ground.

The TGOGC ground anchor is specially designed to dissipate energy from the equipment in use and stabilise the footing. The top surface of the ground socket must finish flush with the final finish surface level (*FFL*) of the site. This is now a common practise for TGO's equipment base plates and will allow for surfacing to finish flush with the top of the anchor's base plate. Consequently the installer will be required to weather down to the surfacing depth level (*typically 40mm, unless otherwise specified*). In order to apply a minimum thickness of wetpour, a 20mm flattened ridge will be required all around the anchor base plate.

IMPORTANT:

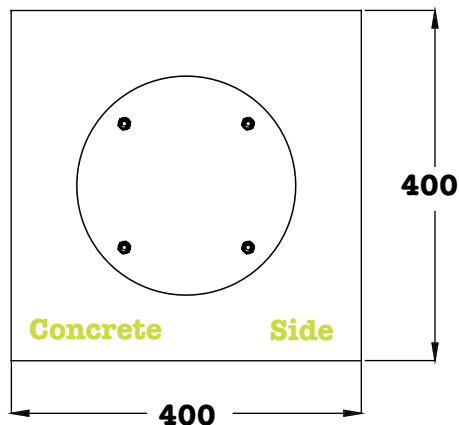
The concrete must completely fill the underside of the foundation. Use the one large hole provided in the top plate (*see left*) as a visual check.

IMPORTANT:

Check that all 4 fixing bolts are greased and fully screwed into each hole before concreting.



16. Small Anchor Installation



Greased fixings:
4x M12 Button Pin Hex
6x M12 Washers

Base Plate dimensions:
250mm Length
250mm Width

Tool:
8mm pinned hex security
drive

Foundation and Ground Anchor at NORMAL conditions:

The dimensions given are the minimum requirement for regular ground conditions & may need to be amended for made up or soft ground.

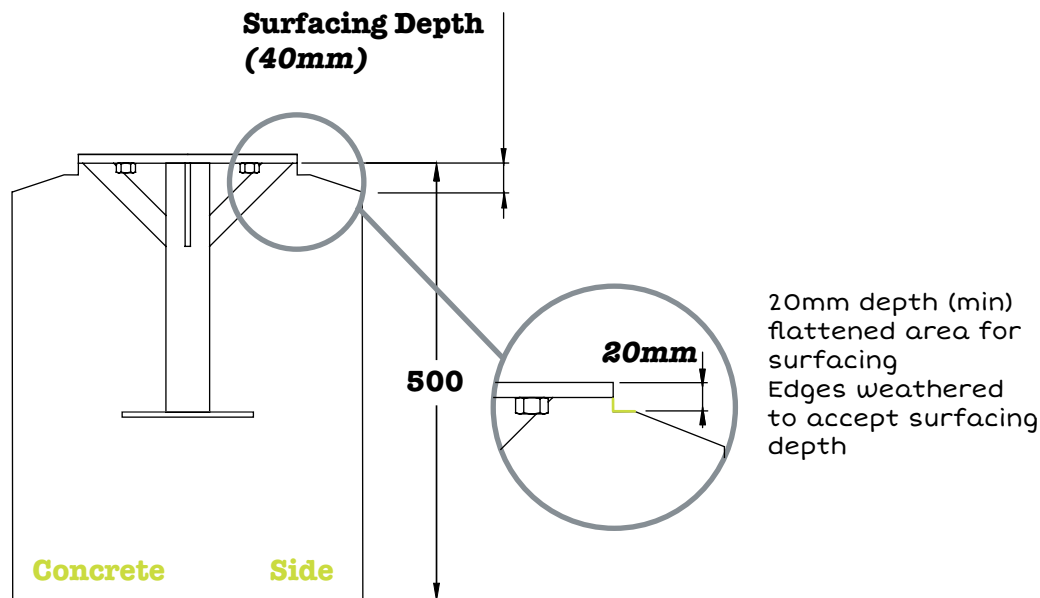
The TGOGC ground anchor is specially designed to dissipate energy from the equipment in use and stabilise the footing. The top surface of the ground socket must finish flush with the final finish surface level (*FFL*) of the site. This is now a common practise for TGO's equipment base plates and will allow for surfacing to finish flush with the top of the anchor's base plate. Consequently the installer will be required to weather down to the surfacing depth level (*typically 40mm, unless otherwise specified*). In order to apply a minimum thickness of wetpour, a 20mm flattened ridge will be required all around the anchor base plate.

IMPORTANT:

The concrete must completely fill the underside of the foundation. Use the two large holes provided in the top plate (see *left*) as a visual check.

IMPORTANT:

Check that all 6 fixing bolts are greased and fully screwed into each hole before concreting.



17. Correct Anchor Installation



This photo shows a correct Anchor installation, where the pouring of concrete fills up to the underside of the anchor, by using the two openings as guidance.



It is good practice to mark the gym out prior to excavation using wires and pegs. The use of pegs and stage at which the marking commences is down to installer discretion and



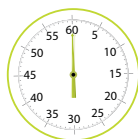
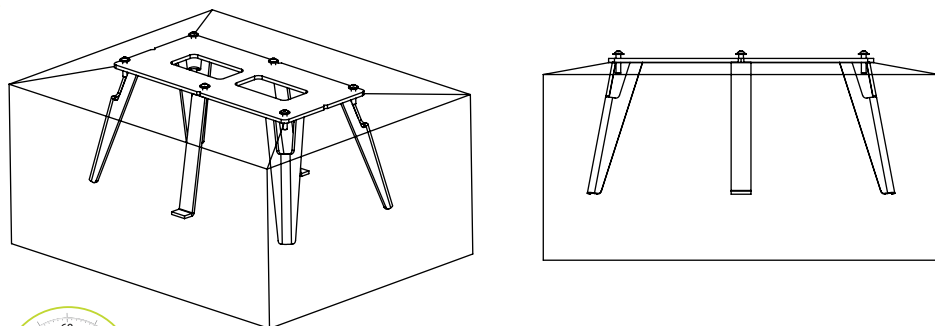
A perfect example of an anchor excavation. Note how the dig-out is straight edged and the faces run perpendicular to one another. The footing can be undercut (tapered outwards) for extra stability. At no stage should the excavation be rounded at the bottom.



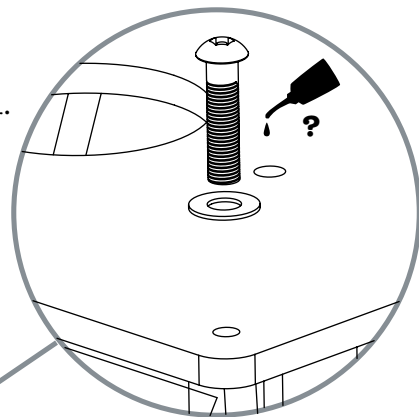
This photo shows an **incorrect Anchor installation**, where the concrete **does not** go up fully to the underside of the anchor base plate (note the gap). The foundation is neither square, nor does the anchor sit central to it. The bolts have been removed prior to concreting, when they should remained (greased).

18. Equipment to Anchor Fixture

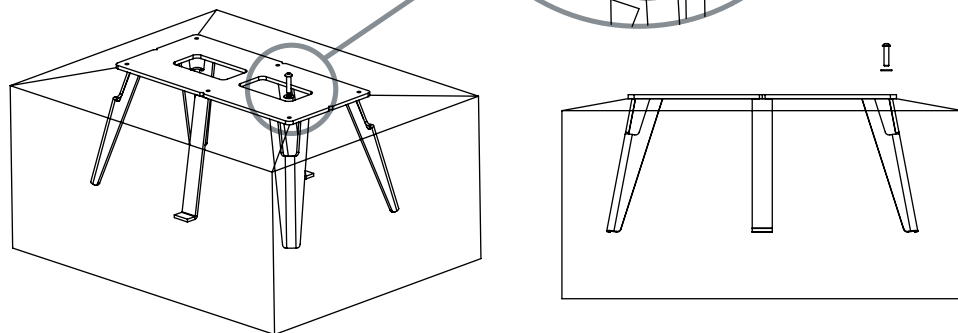
1



... Wait until cured.



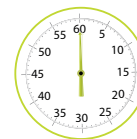
2



Installation TGO equipment to a ground anchor:

1

The anchors are usually scheduled to arrive early on site prior to the gym equipment. They should arrive with the fixings, both the M12 Button Pin Hexes and M12 Washers attached; these should be greased. However, please check that this is the case and grease if necessary. Install the anchors as per the concrete dimensions and guidelines shown on pages 22, 23 and 24 (depending on the anchor size).

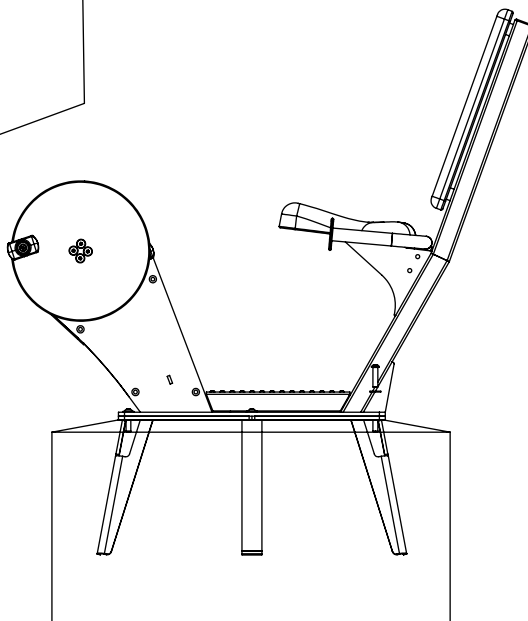
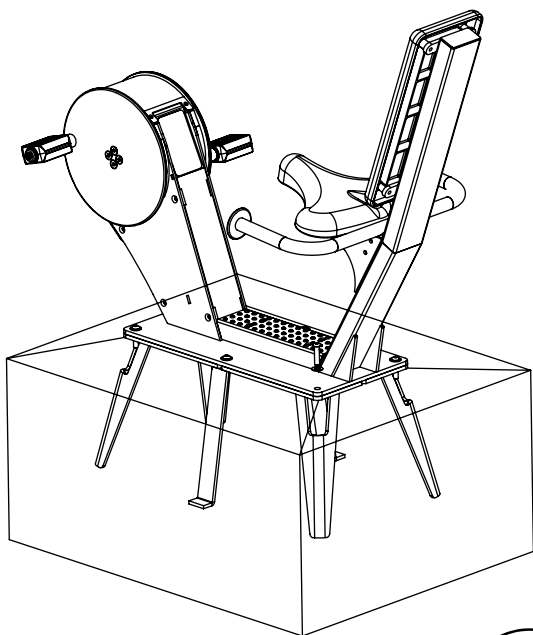


... Wait until cured.

2

The fixings can be removed once the concrete has set. Remember that this is down to the installer's discretion and will vary depending on site conditions, e.g. such as climatic conditions. Appropriate curing time should be allocated and if the installer is in any doubt they should consult the concrete suppliers for guidance. Please leave the fixings until the product is installed.

3



3

Insure that the top plate of the anchor is clean from any debris before attempting to mount the piece of TGO equipment down into position. Failure to do so will result in an incomplete bond between the equipment and anchor and could lead to premature installation failure. The equipment is then lowered down on the anchor and the fixings reinstalled into there position. Do not forget to reapply the washer.

Note 1:

Insure that the anchor surface has been cleaned prior to equipment attachment, as to achieve a flush connection between the equipment and anchor.

Warning:

The equipment is heavy and will require a minimum of two (2) persons to manoeuvre the equipment into position. Attempting to position the equipment onto an anchor solo may result in injury. The installer should refer to the relevant product cards for the product Weight and dimensions.

19. Surface Mount Installation

20.1 Continuous Concrete Area



HILTI HST M12x145



HILTI HIT-Z M12x155



HILTI HIT-HY 200-A

Hard standing Surface Mount installation defined:

A hard standing surface mounted installation is considered to be a more cost effective installation technique. It is defined as the ability to mount the equipment onto an existing concrete surface, such as an existing concrete tennis court. As it utilises an existing surface, there should be limited ground works required, except maybe in the case of an energy installation. There are some limitations and strict requirements that must be met and approved upon a site visit from a competent installer.

These requirements for a Hard standing Installation are based on TGO's most vulnerable piece of equipment, TGO810 Pull Up / Assisted Pull:

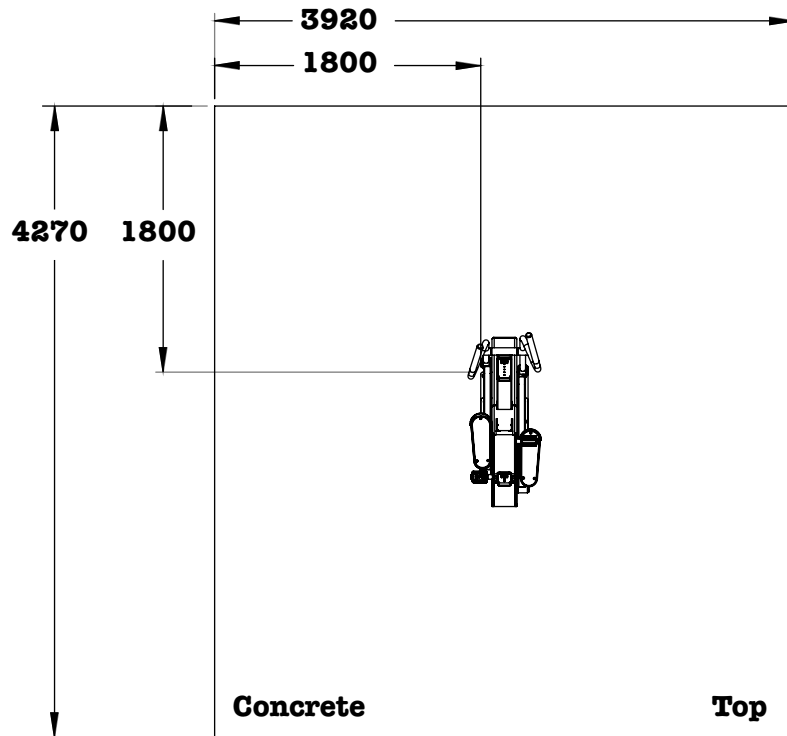
1. Base plate is 10mm thick with a surface area of 320mm x 670mm for the large (anchor) or 320mm x 320mm for the medium base plate (anchor).
2. The surface must be a continuous concrete slab, a minimum depth of 120mm and stretch at least 1800mm from the base plate and needs not be reinforced.
3. TGOGC equipment can share a continuous concrete foundation
4. Concrete pad can be used, but must be 1200mm x 1200mm x 500mm in size.
5. All Fixings should be Galvanised or equivalent and can be of a Chemical/Resin anchor or a mechanical anchor type. They must all reach the depth of at least 120mm. TGO recommend the use of 'HILTI HIT-Z M12' with a 'HILTI HIT-HY 200-A Resin' or for mechanical fixing, a 'HILTI HST M12x145/50'.
6. The 'HILTI HST M12x145/50' fixing type will require a 12mm drill diameter and the 'HILTI HIT-Z M12x140', with 'HILTI HIT-HY 200-A Resin' will require a 14mm drilled hole. If an equivalent fixing is being used, then the installer should consult the supplier for such drill hole details.
7. Ensure A4 stainless steel fixings are used on coastal installations
8. For security, caps should be requested from TGO to hammer over fixing.

These images are property of HILTI and can be found through the relevant search within the website.

Large base plate continuous surface criteria:

Equipment with a large base plate (*requires a large anchor*) will require a consistent slab of concrete measuring at least 3920mm x 4270mm x 120mm, as measured at 1800mm from the base plate.

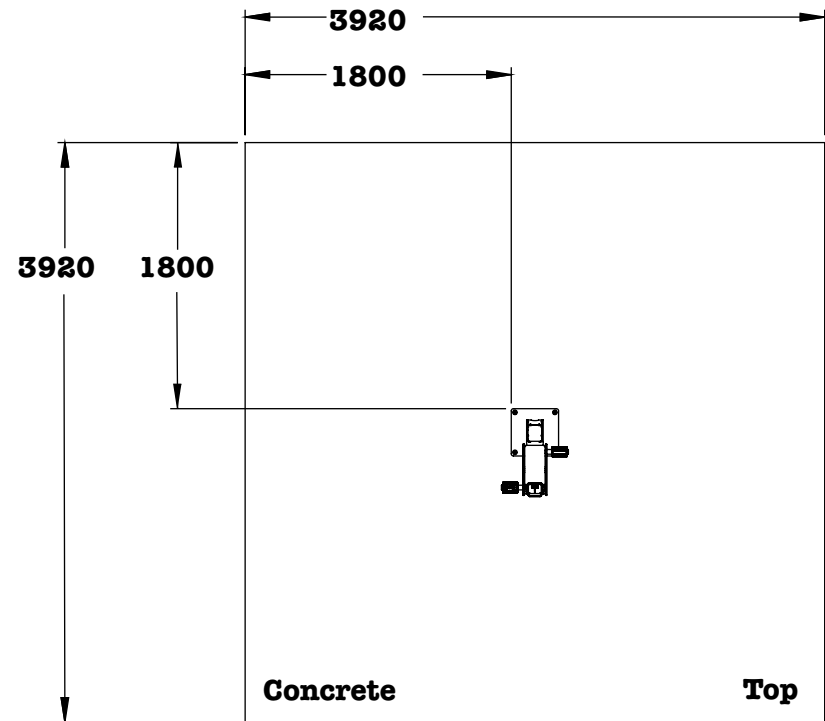
Equipment can share an existing pad of concrete, but the ability to surface mount is subject to site survey by a competent installer.



Medium base plate continuous surface criteria:

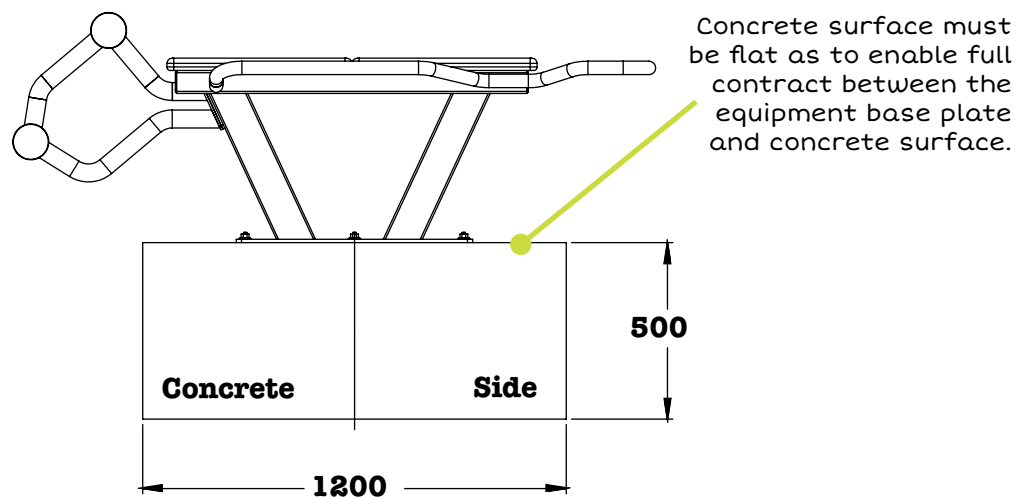
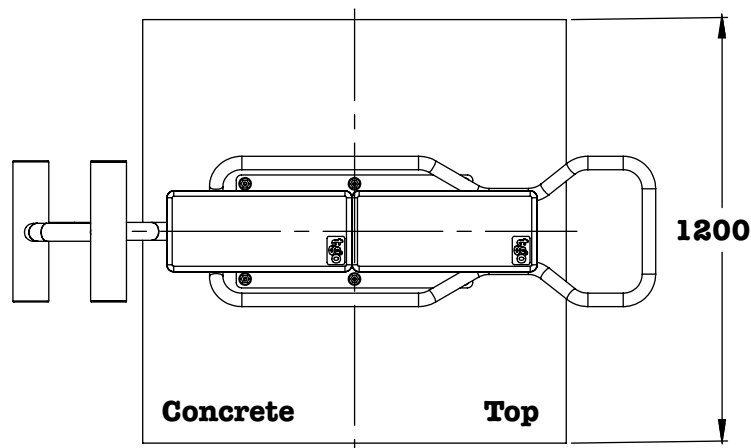
Equipment with a Medium base plate (*requires a medium anchor*) will require a consistent slab of concrete measuring at least 3920mm x 3920mm x 120mm, as measured at 1800mm from the base plate.

Equipment can share an existing pad of concrete, but the ability to surface mount is subject to site survey by a competent installer.



19. Surface Mount Installation

20.2 New built individual pads



Hard standing Surface Mount with new concrete pads:

If the installer chooses to do so, the hard standing installation method can be applied to newly built concrete surfaces. As well as a continuous area, as described previously, individual concrete pads can be assigned to the TGO units. For these pads the installer must be prepared to create a larger foundation. In both instances the minimum dimensions of this foundation, which includes both large and medium base plates, is 1200mm x 1200mm x 500mm. This equates to a 0.72m^2 area of concrete. The installer must ensure that the concrete is flat, so full contact is made between the bottom of the equipment base plate and concrete surface.

The surface mount fixings (*or equivalent*), as described recently, must be used for a pad installation. Insure a washer is present and that the concrete surface is flush and clean of debris before attempting to fasten down the equipment.

Where possible, TGO would prefer that a ground anchor is used over this particular form of surface mount installation.

Large Base Plate dimensions:

670mm Length
320mm Width

Fixings (Large):

6x HILTI HST M12 (x120 min)
6x M12 Washers
or
6x HILTI HIT-Z M12 (x120 min)
with HILTI HIT-HY 200-A
6x M12 Washers

Medium Base Plate dimensions:

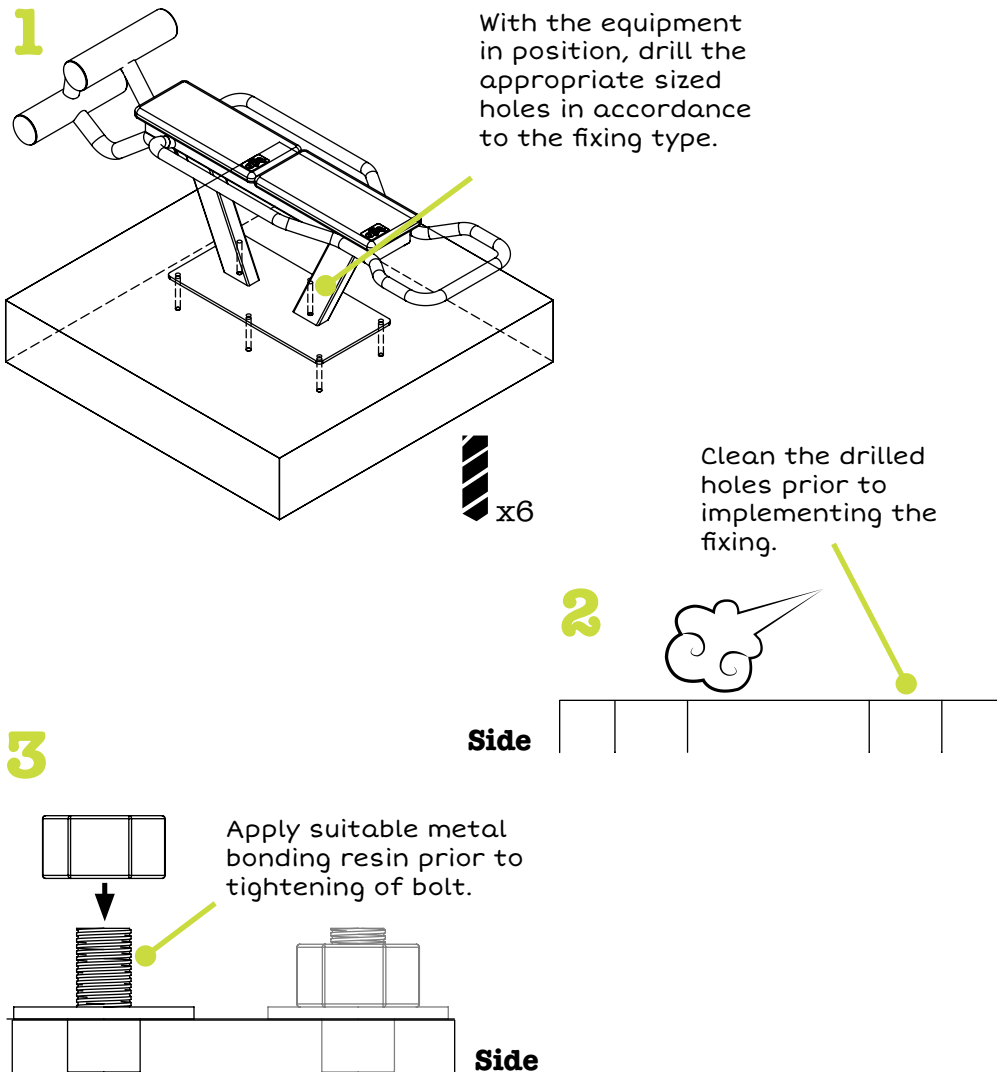
320mm Length
320mm Width

Fixings (Medium):

4x HILTI HST M12 (x120 min)
4x M12 Washers
or
4x HILTI HIT-Z M12 (x120 min)
with HILTI HIT-HY 200-A
6x M12 Washers

19. Surface Mount Installation

20.3 Fixing Method:



Surfacing mounting TGO equipment:

1

The installer should position the TGO gym equipment into position and then drill the holes to accept the M12 HILTI fixing (*chemical or mechanical option*), as specified on page 28. The 'HILTI HST M12x145/50' fixing type will require a 12mm drill diameter and the 'HILTI HIT-Z M12x140', with 'HILTI HIT-HY 200-A Resin' will require a 14mm drilled hole. If an equivalent fixing is being used, then the installer should consult the supplier for such drill-hole details.

2

The drilled holes should then be blown out, brushed and then blown again to remove any loose dust that will inhibit a thorough anchor bond. Remember this:

1. Blow
2. Brush
3. Blow

IMPORTANT:

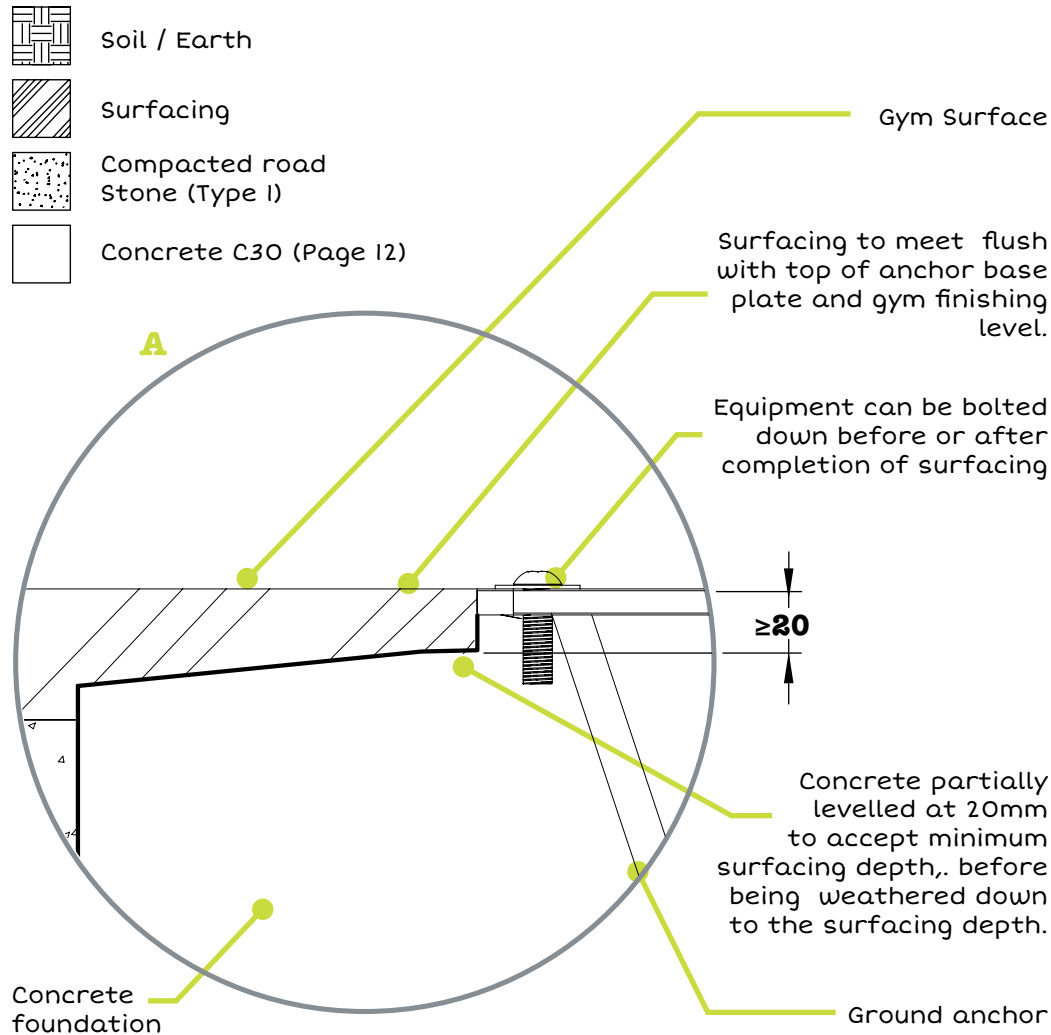
Failure to clean the newly drilled hole can lead to structural failure through insufficient bond of the surface mount fixing.

3

The fixing should then be used as specified by the supplier. In order to create a secure fixing, TGO GC required the installer to apply an appropriate metal bonding resin onto the bolt thread prior to tightening of the nut. A suitable high profile branded adhesive should be used. For example, Loctite®.

20. Surfacing Guidelines

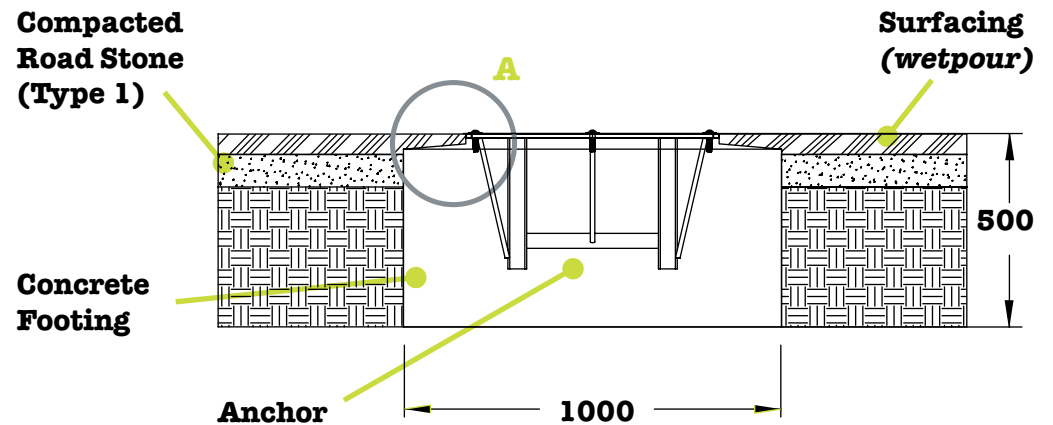
21.1 Anchor installation



Surfacing with a Ground Anchor in NORMAL conditions:

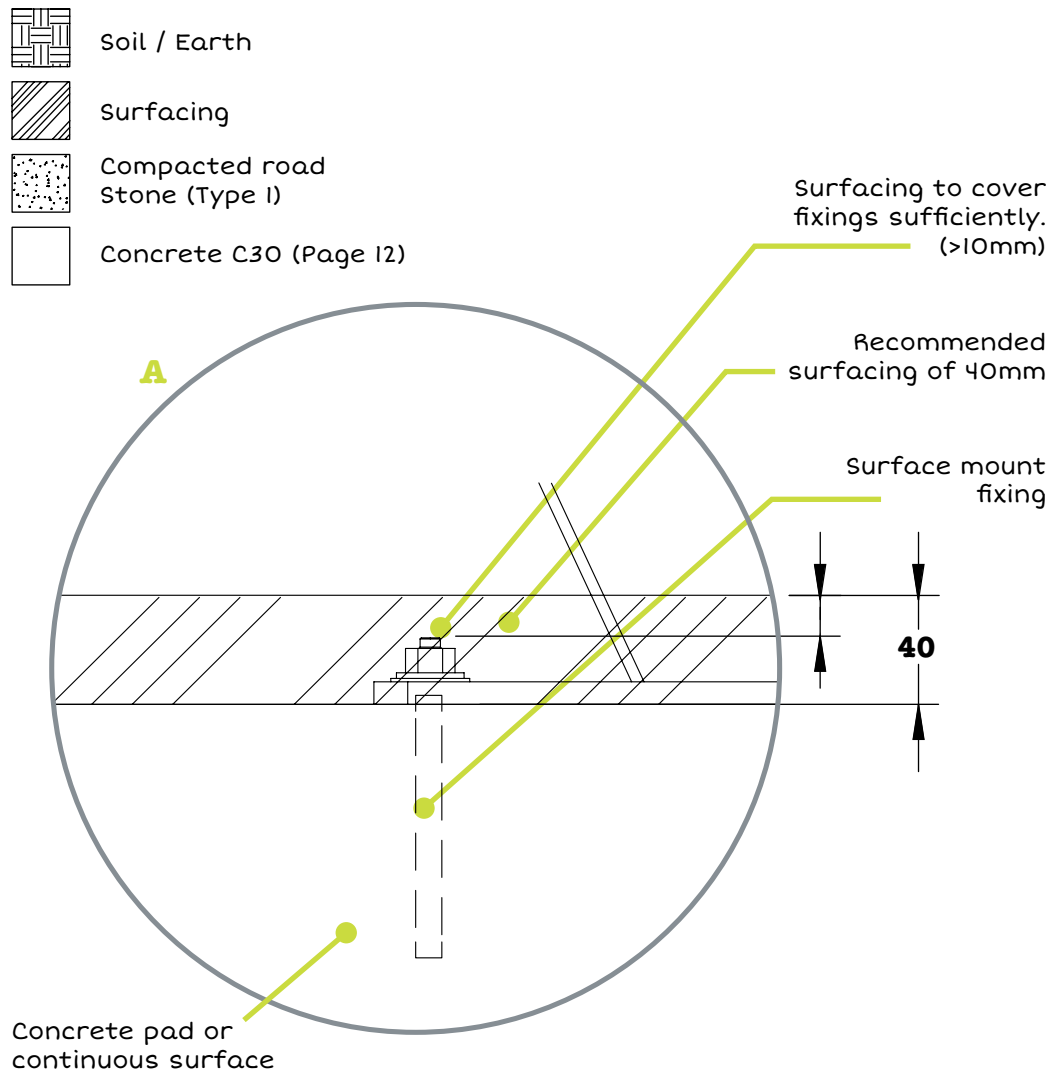
The dimensions given are the minimum requirement for regular ground conditions & may need to be amended for made up or soft ground.

TGOGC recommend a minimum of 100mm of compacted road stone (*Type 1*) for a 40mm surfacing depth, based on wetpour. Always consult with the chosen surfacing supplier prior to any installation, in respect to the correct installation guidelines for the surfacing to be used. Please refer to the diagram to the left and below for clarification on the typical surfacing technique.



Surfacing Guidelines

21.2 Surface mount installation

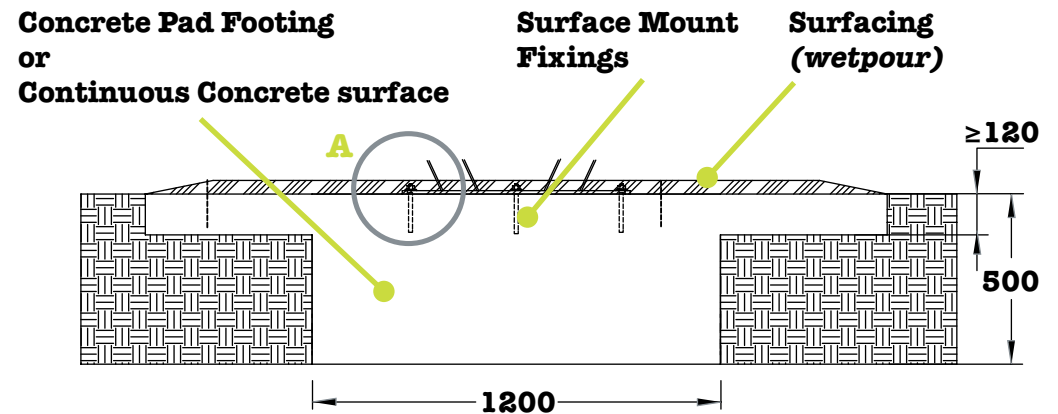


Surfacing for surface installation in NORMAL conditions:

TGOGC recommend a 40mm surfacing depth within their gyms, of which is typically wetpour. Always consult with the chosen surfacing supplier as to the correct installation guidelines for the surfacing to be used, prior to any installation. As there should be no major excavation required on a surface mount installation, the surfacing will consequently be burying the base plates and fixings on the TGO gym equipment.

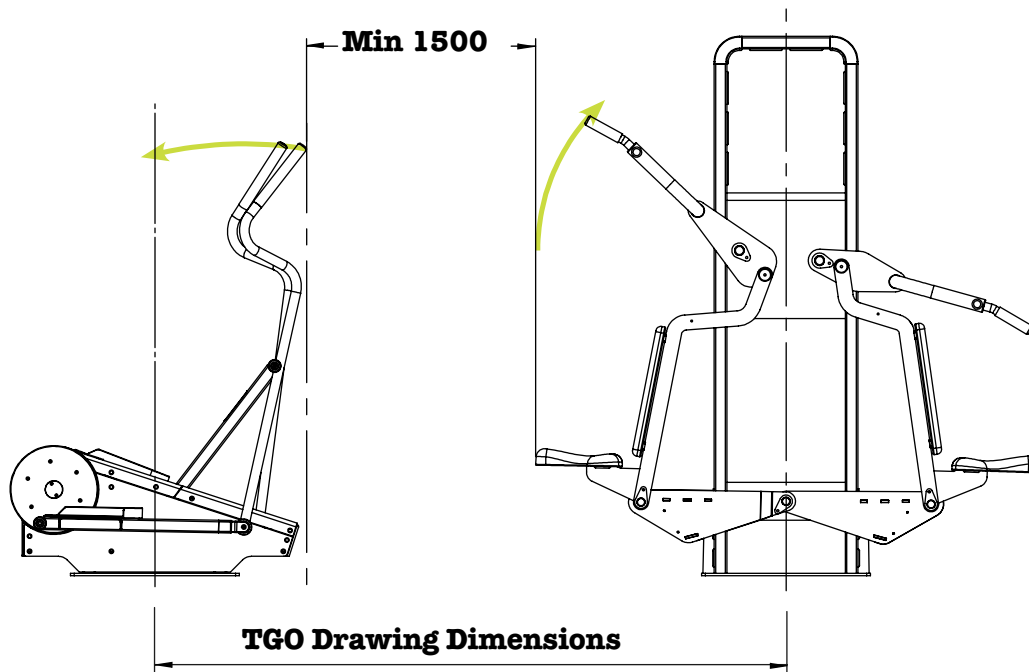
IMPORTANT:

Do not forget to ramp the edges of the surface area as to avoid a trip hazard.



21. Installation Safety Compliance

Gym Equipment Safety Spacing



Installation TGO gyms to EN16630:

The installer should be supplied with drawing to stipulate the correct positioning of the equipment. A minimum spacing of 1500mm (1.5m) must be given to between each gym piece and other obstacles from the furthest extremities of the TGOGC product.

All drawings direct from TGOGC will allow a 25mm installation tolerance (1550mm/1.55m) and will specify the dimensions in millimetres (unless specified on the drawing)

Overhead obstructions should be avoided, but in the case that they cannot, a 2000mm (2m) clearance above and around the equipment from tree branches and other foliage or obstructions should be given. This is including a 1500mm (1.5m) sitting clearance, 1000mm (1m) laying clearance, 1800mm (1.8m) standing clearance and a 300mm (0.3m) hanging clearance.

Intentionally Blank

22 Special Circumstances

22.1 TGO510 RIG

Clear Space Required
(25mm tolerance added
in each direction)



Surfacing

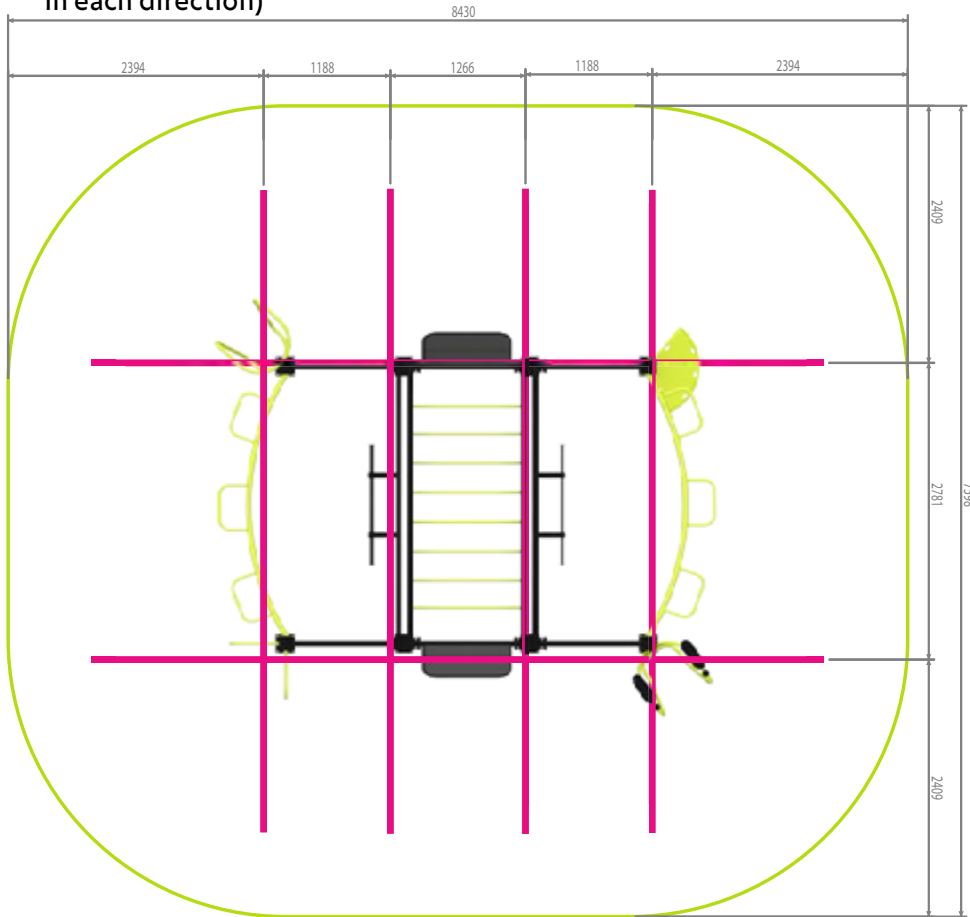


Base Plate & Centre Lines



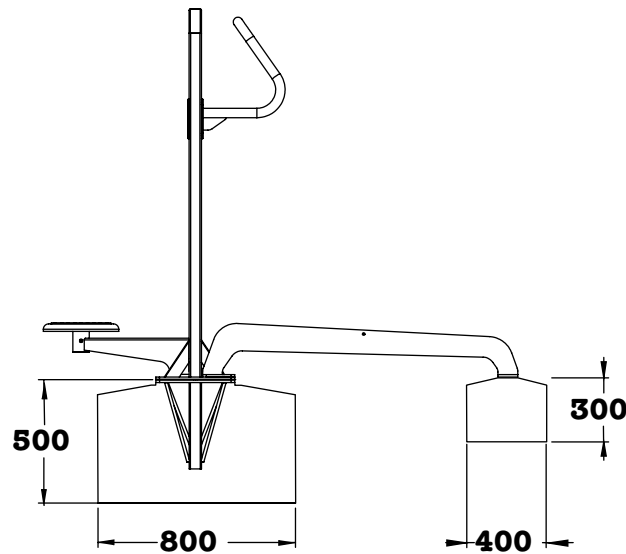
TGO510 Rig safer surfacing:

The safety distances and surface requirements are increased compared with the standard TGO equipment. Refer to the product card for up to date accurate information on the dimensioning and free fall height.

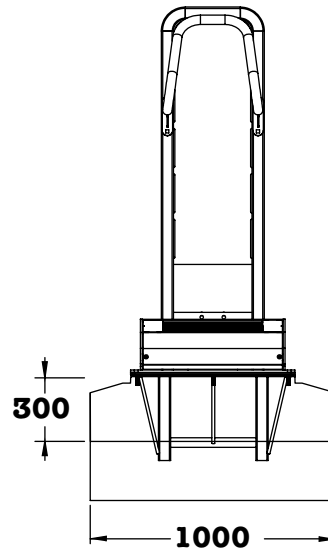


Special Circumstances

22.2 TGO941 Treadmill & Oblique



Side



Top

TGO941 Treadmill and Oblique pad size:

The dimensions given are the minimum requirement for regular ground conditions & may need to be amended for made up or soft ground.

This installation stage technique is applies to TGO941 Treadmill & Oblique and TGO942 Mini Treadmill & Oblique.

In all instances states above, the Treadmill requires a large anchor installation at the TGO888 Sign Frame end of the installation and a concrete pad at the tail end of the Treadmill. The tail end of the Treadmill is fixed down with 2x M12 surface mount fixings as stated before (*or an equivalent alternative*), but of a length reaching 160mm

IMPORTANT:

This product requires the use of a Large anchor and so the installer should refer to the large anchor installation section of this document.

Fixings (Large):

2x HILTI HST M12 x 160

2x M12 Washers

or

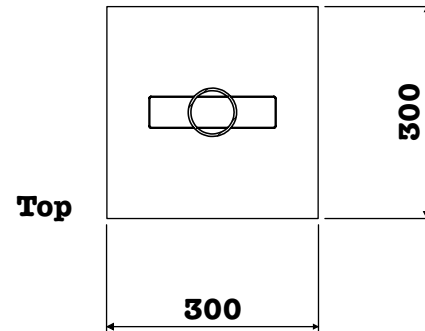
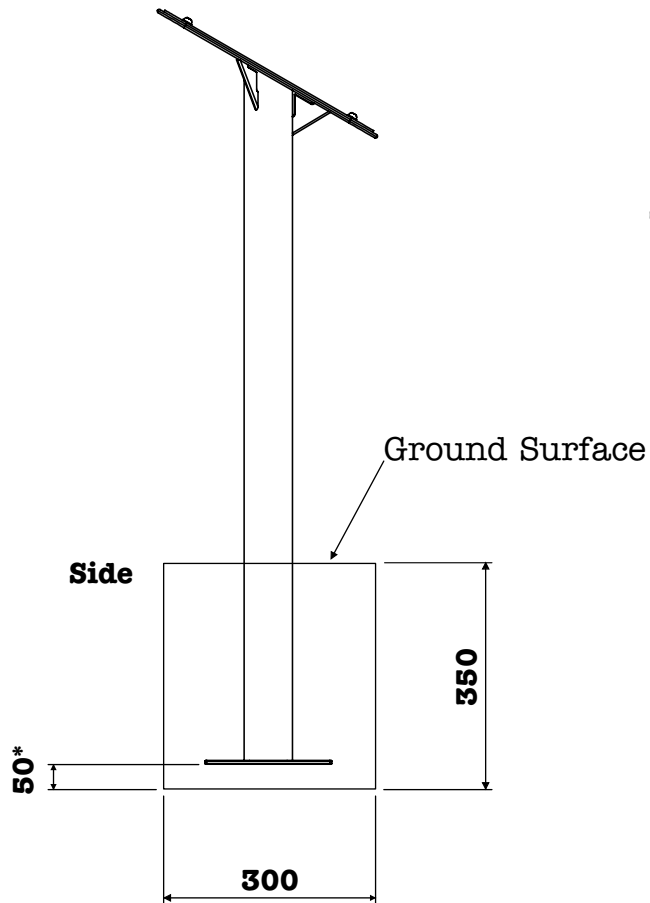
2x HILTI HIT-Z M12 x 160 with

HILTI HIT-HY 200-A

2x M12 Washers

Special Circumstances

22.3 TGO889 Sign Post



TGO889 Sign Post pad size:

The dimensions given are the minimum requirement for regular ground conditions & may need to be amended for made up or soft ground.

Due to the low physical nature of the TGO889 Sign Post, TGO have identified that this product can all be installed using only a 300mm x 300mm x 350mm concrete pad, located centrally about the TGO889 Sign Post. The Concrete pad starts at the ground surface.

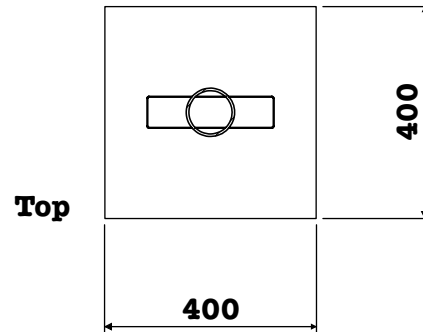
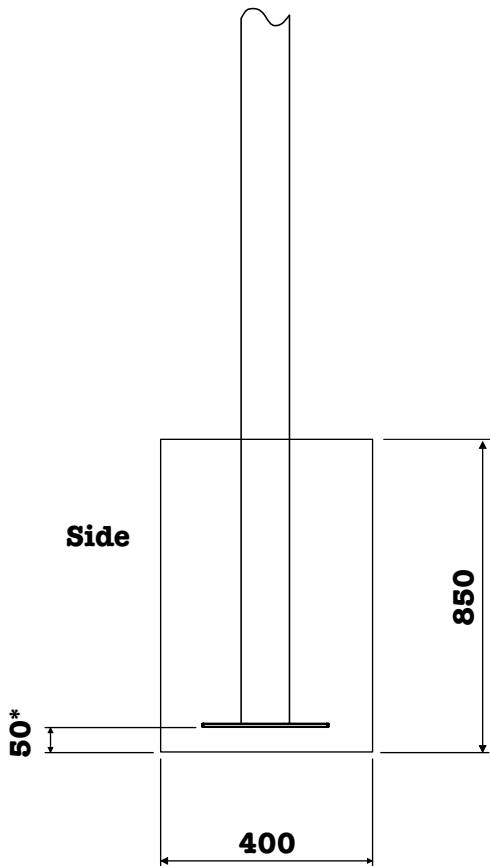
Note:

There is no surface mounting option for TGO889 Sign Post.

* A paving slab can be used to provide a firm and stable base for positioning the TGO889 Sign Post

Special Circumstances

22.4 TGO static post range



TGO static post range pad size:

The TGO static post range includes TGO501, TGO502, TGO503, TGO504 and TGO505. New products could be added to this range, always refer to the product cards for more details.

The dimensions given are the minimum requirement for regular ground conditions & may need to be amended for made up or soft ground.

TGO have identified that this product can all be installed using a 400mm x 400mm x 850mm concrete pad, located centrally about the Post.

Note:

There is no surface mounting option for the static post range.

* A paving slab can be used to provide a firm and stable base for positioning the post

23. Quality Checks

The final Quality Check

It is important that our gyms are compliant to the outdoor gym safety standard, EN16630 . So before the security fencing (Heras) is removed we ask that every installer carries out a final quality check on all the equipment on site to make sure it is safe for public use. If any issues cannot be rectified by the installer on site, then they should notify TGOGC and keep the security fencing erected until the problem has been resolved.

1. All products operate freely and free from stiffness. If the installer believes the products are not operating correctly then they should consult with TGO prior to handing over the gym.
2. Please ensure there are no fixing ends protruding greater than 3mm across any of the products (should ideally fall flush). Any fixings found greater than 3mm should be cropped on site prior to handing over the gym and reported to TGO.

Important:

Coastal fixings will require a protective coating to be applied to the cut surface. If this is required, it should take the form of TGO green touch up paint.

3. A general clean up and wipe down should be done on to the equipment and site. Presentation is everything with a new product, and this includes the TGOGC gym installations. This includes removal of debris from site, wipe down of the equipment and sweep of the surfacing (if applicable).

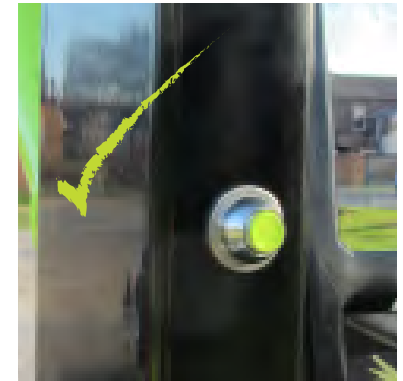
www.tgogc.com / +44 (0)1795 373301

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Note: Overseas customers to contact their local TGOGC suppliers



Fixing is greater than 8mm and needs cropping



Correct fixing length
(Painted end if coastal)

24. Revision History

Revision	Description	Page	Date
3.1	General update	Mutiple	29/09/17