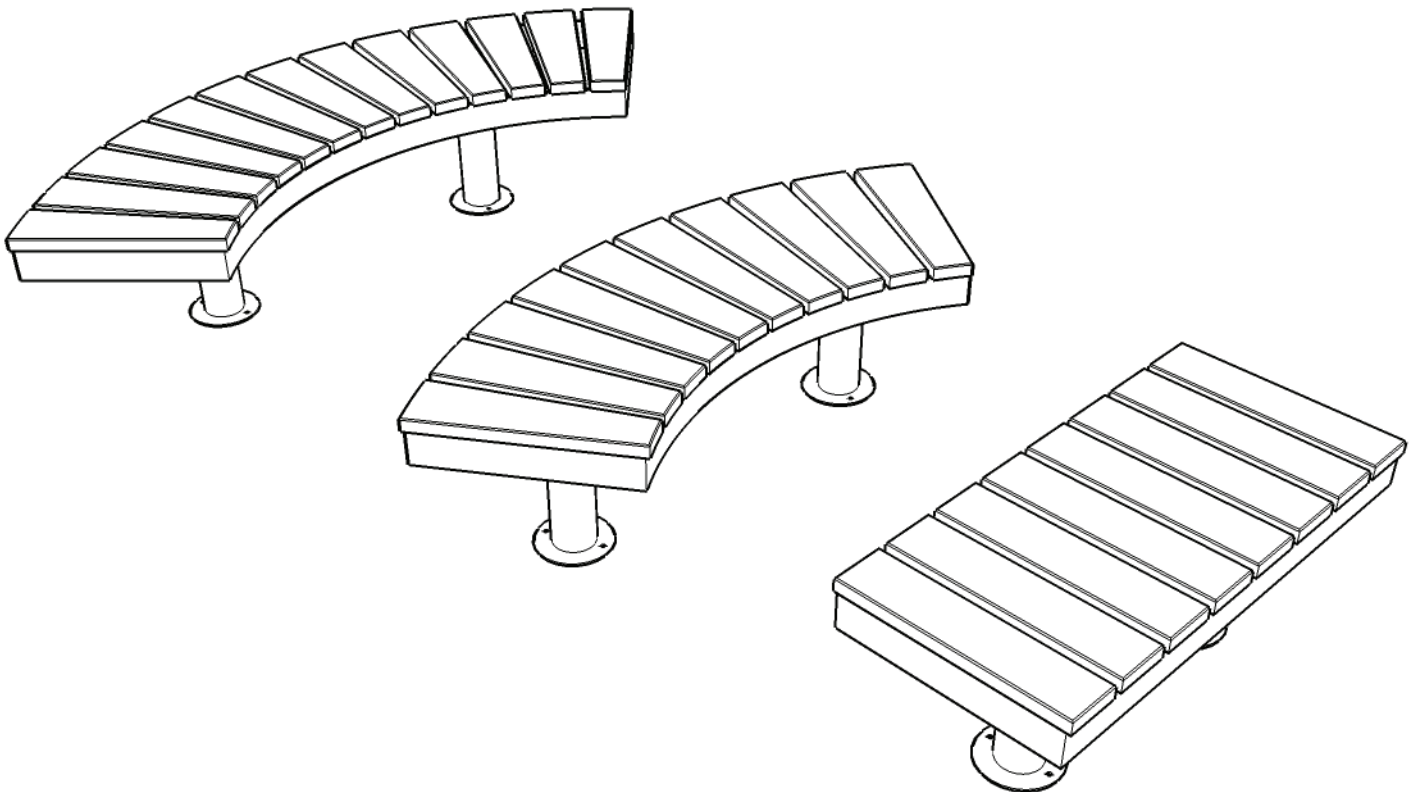




## CHRONOS bench (90°, 69° & Link)

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# Operation & Maintenance Manual

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# Introduction

## Design

Design, shop drawings and development by Factory Furniture Ltd

## Manufacture

Factory Furniture manufactured components. Products are assembled in Factory workshops, checked and dispatched ready for installation. Replacement products or components thereof should be ordered direct from Factory Furniture Ltd

## Copyright

The design copyright for the product and drawing copyright remains the sole property of Factory Furniture Ltd

# General Specifications

## 69° Bench

*Metric* length 1080mm | width 1305mm | height 450mm\*

*Imperial* length 3' 6½" | width 4' 3½" | height 1' 5½"

\* Not including +100mm below ground level for sub-surface fix option

**Approx Weight** 45kg

**Fixing Centres** See drawings at the end of this manual

## 90° Bench

*Metric* length 1400mm | width 1400mm | height 450mm\*

*Imperial* length 4' 7" | width 4' 7" | height 1' 5½"

\* Not including +100mm below ground level for sub-surface fix option

**Approx Weight** 55kg

**Fixing Centres** See drawings at the end of this manual

## Link Bench

*Metric* length 1100mm | width 510mm | height 450mm\*

*Imperial* length 3' 7½" | width 1' 8" | height 1' 5½"

\* Not including +100mm below ground level for sub-surface fix option

**Approx Weight** 39kg

**Fixing Centres** 560mm (1' 10") x 140mm (5½")

# Detailed Material & Finish Specifications

## Seat Slats

- Manufactured from FSC certified tropical hardwood or non-FSC oak (*other timber options available upon request*).
- Profiled and left untreated as standard (*oil or microporous woodstain treatment available on request*)
- Attached to frame with 2 no. fixing lugs per slat

## Frame & Bases

- Manufactured from stainless steel - satin polished finish
- Anchored using 2 no. resin fixed M10 x 200mm threaded rods and cap nuts per base (surface fix) or 2 no. zinc-coated steel M10 x 75mm sleeve anchors per base (sub-surface fix)

# General Maintenance *(Recommended Schedule & Guidelines)*

## Daily/Weekly/Monthly *(or as adopted)*

Visual checks of seat top, back and bases - check all items for superficial or physical damage.

## Three Monthly

Clean all items as detailed below check all fixings are seated correctly; inspect timber for serious damage and splinters.

## Six Monthly

Secure all fixings; full clean as detailed below; check that seat/bench is firmly secured to the ground

# Specific Maintenance Details

## FSC Timber / Non-FSC Timber

Clean with a stiff brush once per year, especially in more exposed locations, in order to prevent a verdigris type build up on the timber surface. Ideally this should be completed in early spring. During the cleaning stage, all exposed timber surfaces should be inspected for splits and splinters. Any splinters and graffiti should be removed and the surface sanded with 100 grit sandpaper in order to remove any uneven / sharp edges or surfaces.

*During the first few months after installation the tannin naturally occurring in the timber may leach out and cause a brown staining on the bases. This may be removed with a light solution of household bleach and water.*

## Stainless Steel *(polished stainless steel only)*

Clean as required, but at least every three months, using a stainless steel polish and a lint free cloth. To remove ground in dirt, a stainless steel finishing pad may be required.

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# Repairs

## **FSC Timber / Non-FSC Timber**

For light damage, please see section on specific maintenance details above. For instances of heavy damage, the timber item should be replaced. Please order against the part number reference in the reordering section towards the end of this manual.

## **Stainless Steel**

Light damage (surface scratches etc.) can be removed using an emery pad (240 grit) and freeing oil such as 'WD40'. Care should be taken to follow the direction of the brushing grain. It is recommended that a trial repair be carried out on an unimportant surface first. No corrosive cleaners or other abrasives should be used. Any contamination, particularly carbon steel scuffs from vehicles, should be quickly removed to avoid corrosion.

## **Heavy Damage**

In the event of serious damage to any component, replacements should be ordered from Factory Furniture Ltd. In this event (or if the product needs to be disassembled for any reason), please contact Factory Furniture for detailed technical advice.

# Reordering / Spares

<b>Part No.</b>	<b>Item Description</b>
P1017 / 01	1 no. Chronos 69° bench top assembly (bases not included)
P1017 / 02	1 no. Chronos 90° bench top assembly (bases not included)
P1017 / 03	1 no. Chronos link bench top assembly (bases not included)
P1017 / 04	1 no. Chronos surface fix satin polished stainless steel base
P1017 / 05	1 no. Chronos sub-surface fix satin polished stainless steel base
P1017 / 06	1 no. Chronos 'module combiner' pack (fittings for combining two bench modules)

## **Instructions For Reordering**

If possible, please specify job name or number at the time of reordering to enable identification of details such as the original species of timber used, stainless steel finishes and polyester powder coat colours etc. In any event where either, additional orders are required, or spares and replacements are required please contact Factory Furniture Ltd. Using the part numbers given above as reference should help us to process your enquiry more efficiently.

Note - All fittings required to assemble ordered parts will automatically be included in the order.

# AutoCAD Drawing List

FF1017 / 01	CHRONOS MODULAR BENCH	90° & 69° MODULES
FF1017 / 02	CHRONOS MODULAR BENCH	FABRICATION DRAWING
FF1017 / 03	CHRONOS MODULAR BENCH	SETTING OUT DRAWING
FF1017 / 04	CHRONOS MODULAR BENCH	INSTALLATION DRAWING

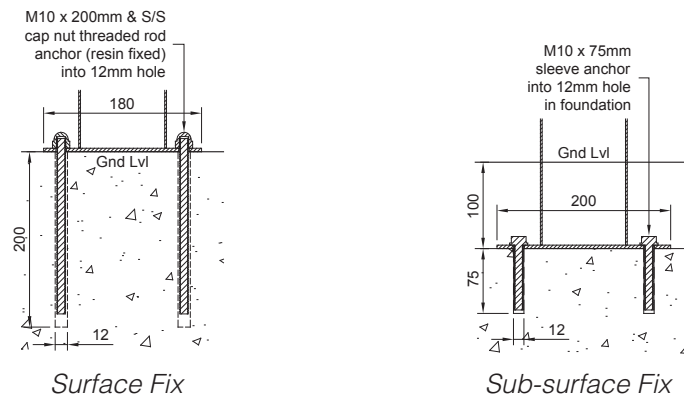
# Contacts

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# Installation Instructions

**ALL INSTALLATION WORKS TO BE CARRIED OUT BY COMPETENT PERSONNEL - INSTALL AS COMPLETE UNIT.**



## **Chronos Bench** (surface & sub-surface fix)

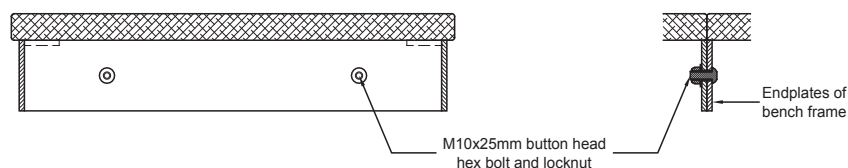
1. Install suitable foundation pads (see illustration) each with top face at ground level or 100mm below finished ground level for sub-surface fix
2. Unpack pair of bases and attach to the bench top assembly using 2 no. M10 x 25mm button headed hex bolts & locknuts per base (4 no. total per bench) and tighten to 14Nm
3. Position bench in correct orientation with bases centrally on foundation pads, then mark hole positions through base plates. If multiple benches are being connected then fix benches together (see below) temporarily whilst marking base positions to guarantee alignment.
4. Remove the bench; drill holes  $\text{Ø}12\text{mm} \times 200\text{mm}$  deep (surface fix) or  $\text{Ø}12\text{mm} \times 75\text{mm}$  deep or as manufacturer's instructions (sub-surface fix).
5. Clear debris from holes.
- 6a. (Surface fix) Fill the holes to within approximately 35mm from the top with Hilti HY150 resin (or similar). Lift the seat (with threaded anchor rods/capnuts in place) and carefully lower the anchors into the holes, leave for two hours before using.
- 6b. Using a torque wrench, tighten nuts and washers over flange plates to 30Nm to fasten down the bench.
7. (Sub-surface fix) Reposition bench unit and fix to foundation pads using 2 no. zinc-coated M10 x 75mm sleeve anchors per base tightened to 50Nm (or as per manufacturer's instruction). Ensure bench remains level during fixing process.
8. Check level & re-instate ground level if necessary (sub-surface fix).

## **IMPORTANT NOTE:**

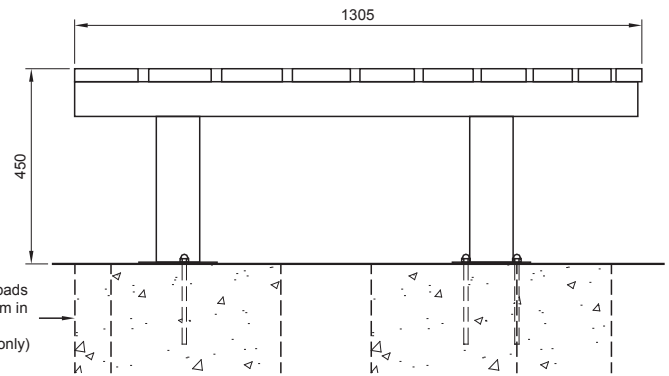
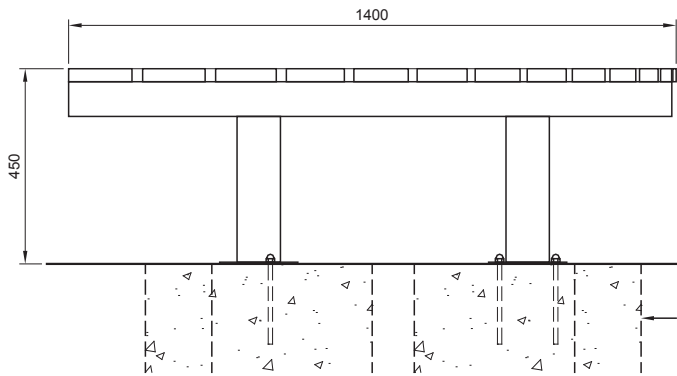
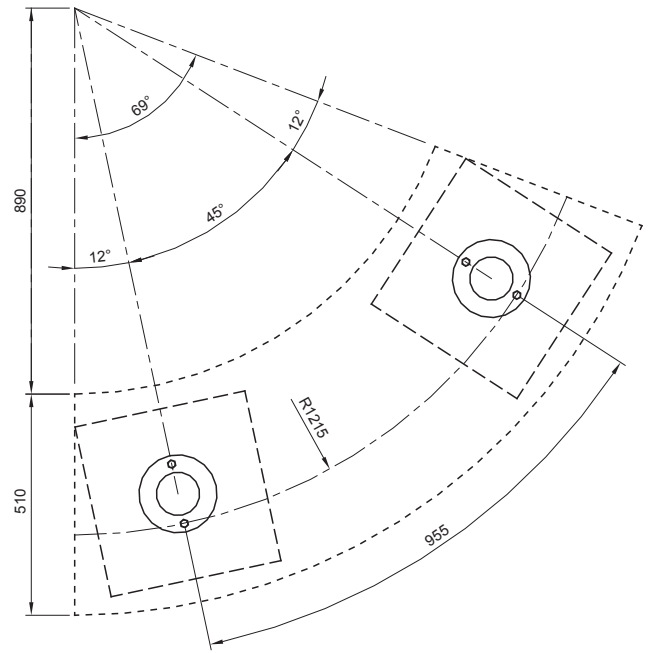
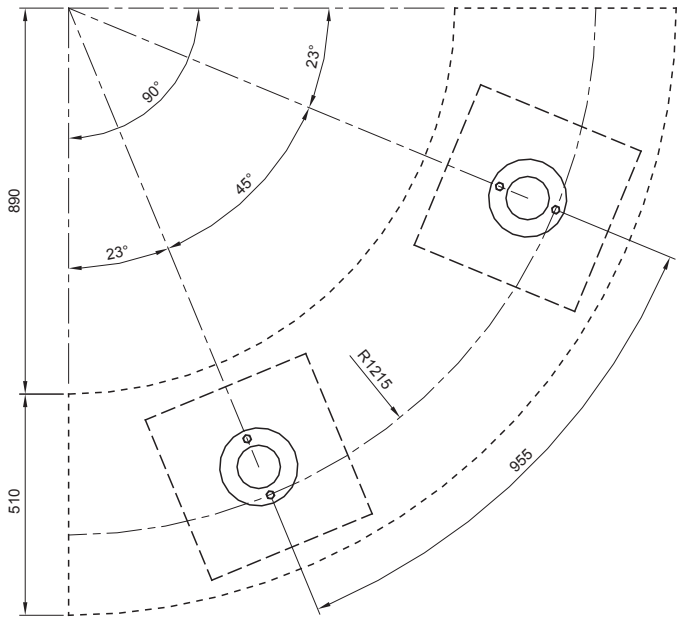
Ensure that stainless steel is protected during site cutting of stone – contamination from disc cutters will produce corrosion on stainless steel components.

## **Chronos Bench** (Connecting bench modules together)

1. Fix bench modules together with 2 no. M10 x 25mm button headed hex bolts and locknuts through the pre-drilled holes in the bench frame.



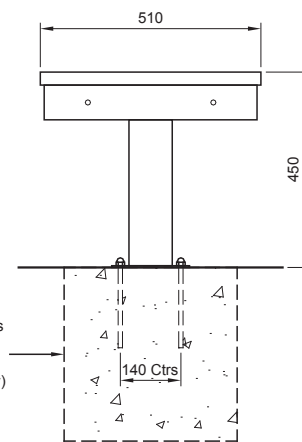
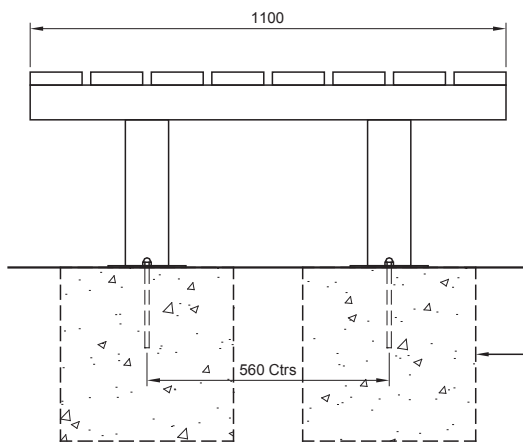
# Installation Setting Out Drawings



Foundation 2 no. pads  
400 x 400 x 400mm in  
C20 concrete  
(recommendation only)

Chronos 90° Bench Module

Chronos 69° Bench Module



Foundation 2 no. pads  
400x400x400mm in  
C20 concrete  
(recommendation only)

Chronos Link Bench Module