ZERO WASTE
UNBREAKABLE FOUNDATIONS

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DIRECTIONS FOR USE

ZERO WASTE

ZERO HEAVY LABOUR

ZERO RISKS

ZERO ONGOING COSTS

Installation tool

Removal Tool

Sheared post removal tool

Foot removal tool

UNIT INCLUDES

- Ground socket
- Self-locking Taper
- Screws
- Cap

TOOLS

- Installation Tool
- Removal tool
- Foot removal tool

SOLD IN PACKS OF 25 UNITS

Boxes of ground sockets and Self-locking Tapers available
Quantity Discounts

Ground sockets are 350 mm Depth. You can decrease depth of ground socket to 150mm, and additional ground sockets are used to extend depth by 300 mm increments.

You can install any size or weight item and can secure large diameter bollards on the same ground socket using **ZERO RINGS**

INSTALL SOCKET

Install ground socket flush with ground level in concrete footing putting an end to digging and heavy labour for the next 100 years

INSTALL ITEMS

Attach Taper at correct level and simply drop item into ground socket -It will automatically lock in using friction and items will remain safe and secure, perfectly aligned year after year

REMOVE ITEMS

Simply pop items out using tools provided (tools provided to remove flattened and sheared off posts). With no breakable components or padlocks that can rust- the tools work every time.

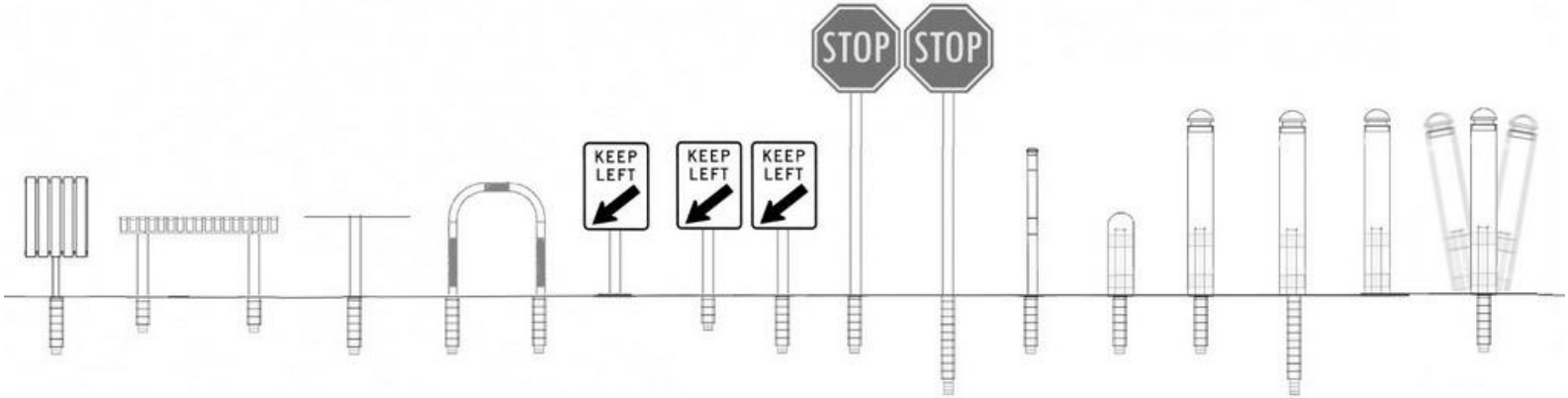
USE TO SECURE

Posts, grabrails, bins, barriers, bollards, and street furniture

You can install any wall thickness of CHS post (traffic and parking signposts/grabrails/ tables, barriers/ bollards/ street furniture) and large diameter bollards (150 - 168 mm using ZERO RINGS) in same ground sockets. Make all infrastructure removable, replaceable, and relocatable in seconds. Items become interchangeable.

Excellent for annual events, disaster response and disaster recovery as

- You can install the infrastructure for an event in seconds
- All items remain perfectly aligned safe and secure
- You can quickly install/ remove barriers and change the configuration as needed
- Block off streets quickly
- Quickly react to changing requirements
- Clean up following events or disasters







IMPORTANT

Ground sockets are installed flush with ground level Concrete strength must be 30 MPa or greater. Rapid set is NOT impact resistant /grout is too flexible and will not last 100 years.

SIZE FOOTING

The size footing depends on soil conditions, strength of post, size of item, wind conditions and many other factors. Refer to local guidelines.

We suggest

- 150 mm in solid concrete
- 350 mm in all other locations
- 650 mm depth for large / heavy items or free-standing items in soil (still need concrete)

NB: Surface Mount option available

WHEN POURING CONCRETE FOOTINGS:

Clip Taper 20 mm higher from base (do not use screws yet) and insert item gently into socket

Position socket upright in hole and pour concrete. Check alignment before concrete cures. Once cured you should remove item, attach taper at correct position using screws and reinsert item firmly in ground socket (Tap on top until Taper finishes flush

USING INSTALLATION TOOL

In strong winds; when installing large items / or items are not ready to install, or when you do not have time to wait for concrete to cure, place installation tool inside socket and use to position socket & check alignment. Once compacted, spin tool to remove and insert the cap

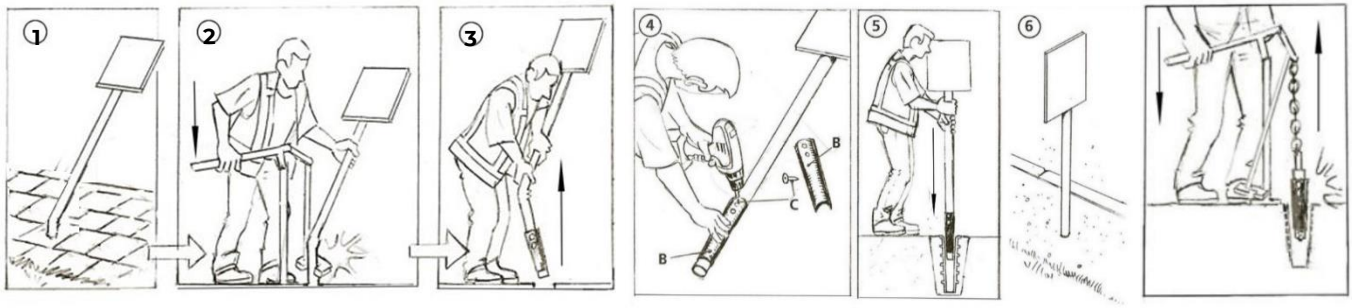
RETRO-FITTING

Min150 mm quality concrete (MPa30+) is required on all sides of socket. You can core drill a hole 150-200 mm diameter and fill gap with 30MPa concrete or remove a few pavers to install concrete footing. We suggest colouring the concrete to match surrounding paving.

ITEMS WITH MULTIPLE LEGS

Insert grabrail into sockets and measure where to attach the taper. On uneven surfaces the taper on one leg is higher so grabrail is level with paving when installed.

A taper is attached to a new post and dropped into position



INSTALL ANY WEIGHT OR SIZE ITEM

You can install any wall thickness of CHS post / grabrails/ tables, barriers/ bollards/ street furniture/ and large diameter bollards in same ground sockets

TAPER MUST BE ATTACHED

If Taper is not attached using screws, items will NOT be removable from ground socket. Taper must be attached at exact level (5mm alters locking capacity by around 200kgf).

Attach Taper to post using Phillips drive and self-drilling screws supplied. Best to pre-drill posts 2.9 + wall thickness

- 140 mm from base for 150 mm socket
- 340 mm from base for 350 mm socket
- 640 mm from base for 650 mm socket

REMOVING DAMAGED ITEMS

Place head of removal tool around post. Place square base of tool close to post and apply quick jerking pressure to the extended arm to remove item from ground socket. You can place foot on base to stabilise and provide added friction.

REMOVING FLATTENED POSTS

If post is flattened slip foot removal tool or square base of removal tool under the flattened post and apply quick jerking action to release taper (only needs to move approx. 1mm to break seal) alternatively use foot tool or crowbar.

REMOVING SHEARED OFF POSTS

Lower triangular head of sheared post removal tool into the socket until it grabs the internal sides of the post.

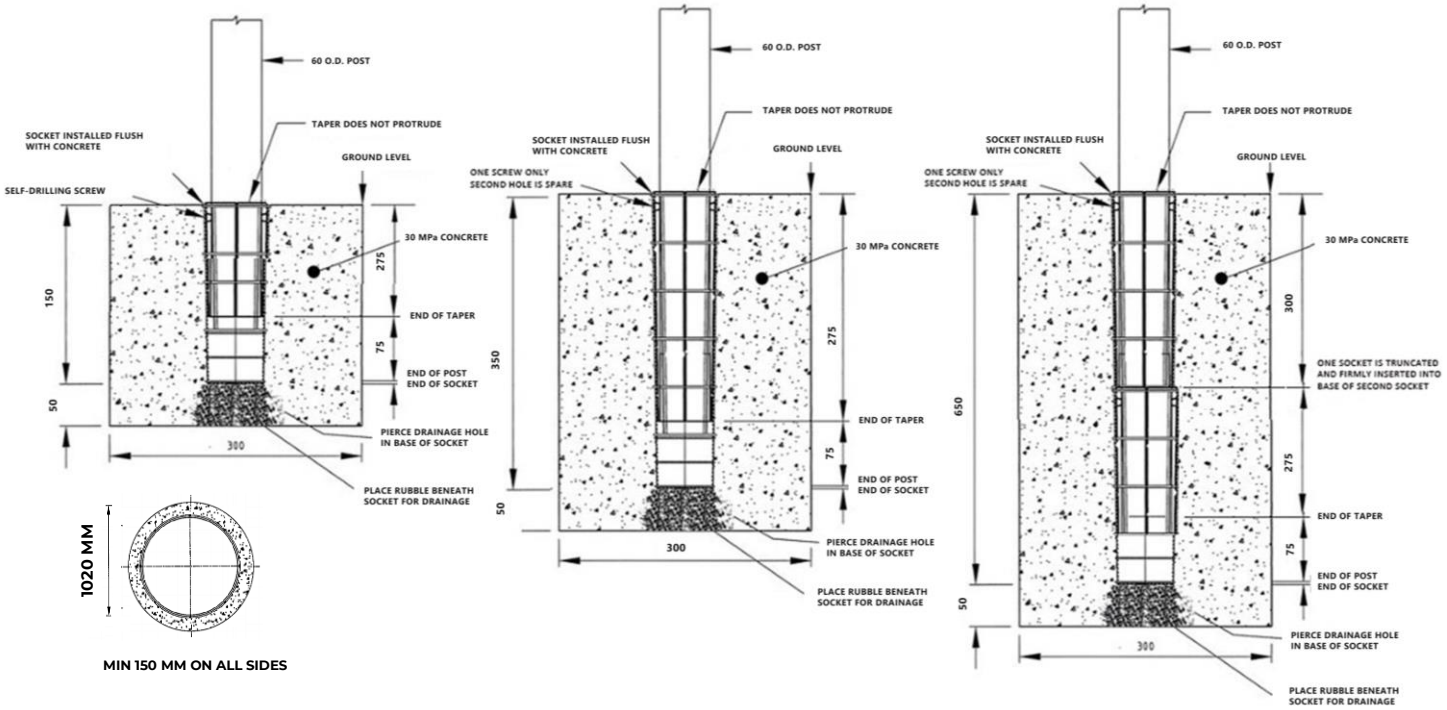
Hook chain link around pin on top of removal tool and use tool as usual to remove the post.

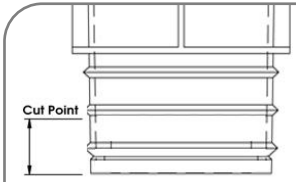
EXTENDING DEPTH OF SOCKET

You can increase the depth by 300 mm increments by truncating a ground socket just below the second horizontal rib and inserting it firmly into the top of a complete ground socket

REDUCING DEPTH OF SOCKET

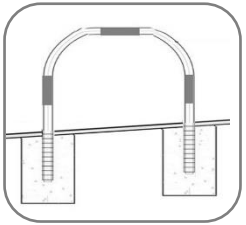
Truncate the ground socket at exactly 150 mm from top lip. Remove the bottom of the ground socket (just below the second horizontal rib) and insert into the open end of the truncated ground socket. This provides a tight fit but can be sealed with industrial glue





TO INCREASE DEPTH: To extend depth you truncate ground sockets just below the second horizontal rib and insert truncated end firmly into the top of a complete ground socket.

TO REDUCE DEPTH: Truncate bottom from one socket at 150 mm. Remove base by truncating as shown here and inserting base into truncated end of 150 mm socket.



TASK	HAZARDS	SAFE WORKING PROCEDURES
Installing Sockets 	- Bending of the back - Twisting of the back - Working in traffic	• Dial before you dig • Install appropriate traffic management • Dig hole to insert ground socket • Insert Installation tool inside ground socket • Lower Installation tool & socket into hole and fill with concrete. • Operate installation tool from standing position with straight back
Installing Items 	- Bending of the back - Twisting of the back - Working in traffic - Item not secure	• Install appropriate traffic management/ cones • Attach Taper to item using self-drilling screws provided (This can be done prior to going onsite to reduce time on location) • For 2.9 – 3.6 wall thickness posts we suggest pre-drilling • Using two hands, drop item firmly into ground socket • Check item is sufficiently installed to protect from unauthorized removal
Using Removal Tool 	- Bending of the back - Twisting of the back - Working in traffic - Trapping of fingers	• Position safety cones or safety barriers at extremity of working space • Make sure the base of the tool as close as possible to the base of the item before applying jerking action • Apply downward quick jerking action to arm of tool • Lift item from ground socket using two arms (for items over 25 kg, 2 people must lift item from ground socket) • Bend knees to insert cap in ground socket