

ORBITAL™ CHEVRON

INSTALLATION AND MAINTENANCE INSTRUCTIONS

IMPORTANT NOTE: ENSURE THAT ALL RELEVANT PERSONNEL HAVE THE RELEVANT QUALIFICATIONS/ CERTIFICATES AND ALL WORK IS CARRIED OUT IN ACCORDANCE WITH BS7671:2018/IET WIRING REGULATIONS 18TH EDITION AND READ THESE INSTRUCTIONS PRIOR TO USE.

Please also refer to the 'Manual Handling Operations Regulations 1992' during the handling of the product and materials used for installation. Glasdon recommends that a full Health and Safety analysis and site survey is carried out prior to installation.

INSTALLATION INSTRUCTIONS

Signboard Installation See Page 2
 TYPE 1 - Socketed Installation See Page 4
 TYPE 2 - Extended Base Installation See Page 7

KIT CONTENTS:

	TYPE 1	TYPE 2
ITEM 1 - M8 Nyloc Nut	x6	x6
ITEM 2 - M8 x 30mm Washer	x6	x6
ITEM 3 - M8 x 75mm Bolt	x6	x6
ITEM 4 - Chevron Signboard	x1	x1
ITEM 5 - Stem Access Plug	x2	x2
ITEM 6 - Chevron Signcarrier	x1	x1
ITEM 7 - Glasdon Key	x1	
ITEM 8 - Stem Vent Plug	x2	x2
ITEM 9 - M8 x 20mm Bolt	x4	x4
ITEM 10 - M8 x 20mm Washer	x4	x4
ITEM 11 - Anchor Pin	x2	x2
ITEM 12 - Orbital Lockfast™ Socket Wedge	x2	
ITEM 13 - Orbital Lockfast™ Socket	x2	
ITEM 14 - Orbital Lockfast™ Plug	x2	
ITEM 15 - Subsafe Cover Cap	x4	x4
ITEM 16 - M10 Nyloc Nut	x4	x4
ITEM 17 - M10 x 24mm Washer	x4	x4
ITEM 18 - Subsafe Underground Box	x1	x1
ITEM 19 - 5m Extension Cable	x1	x1
ITEM 20 - IP68 Connection Plug	x2	x2

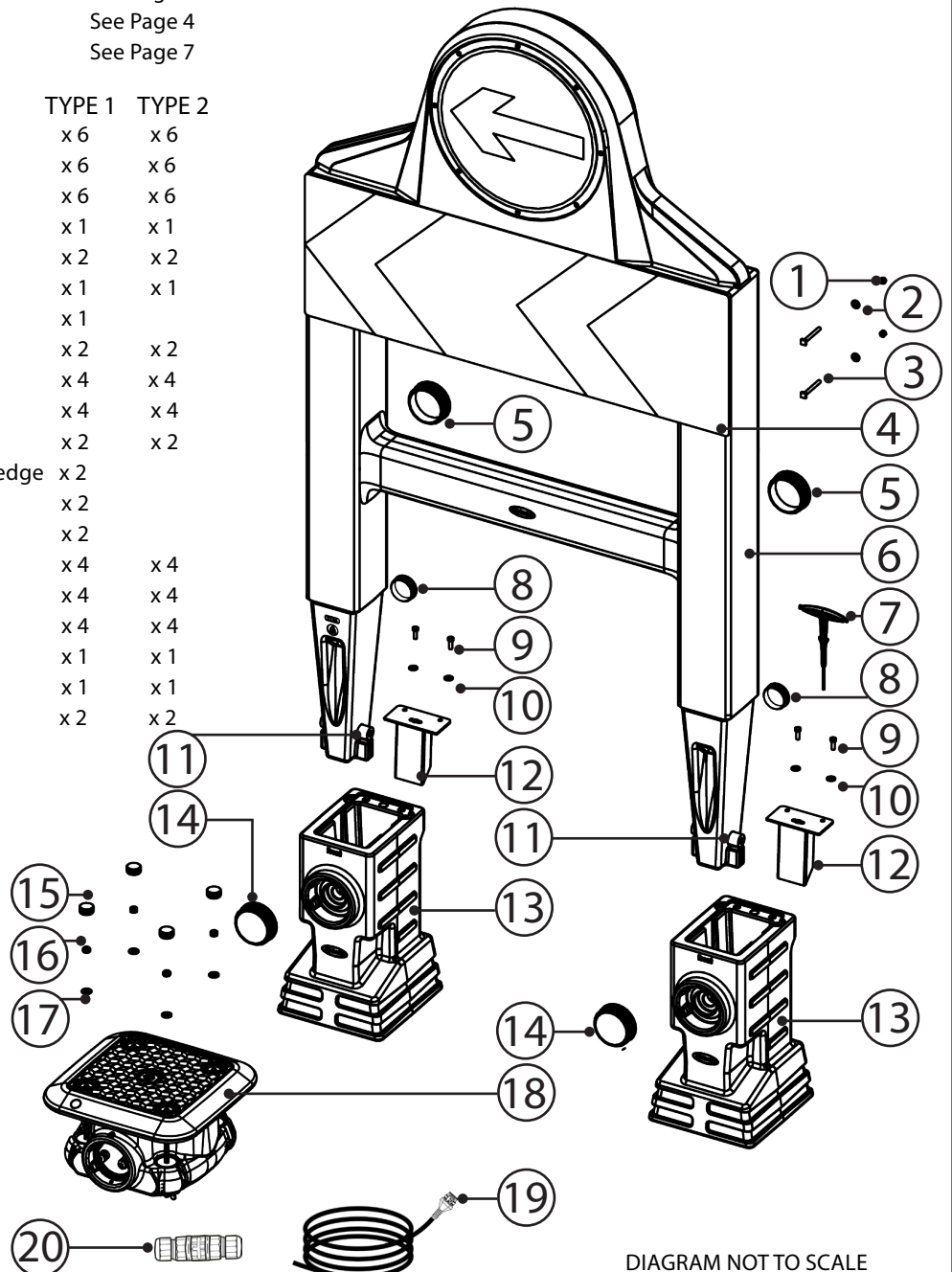
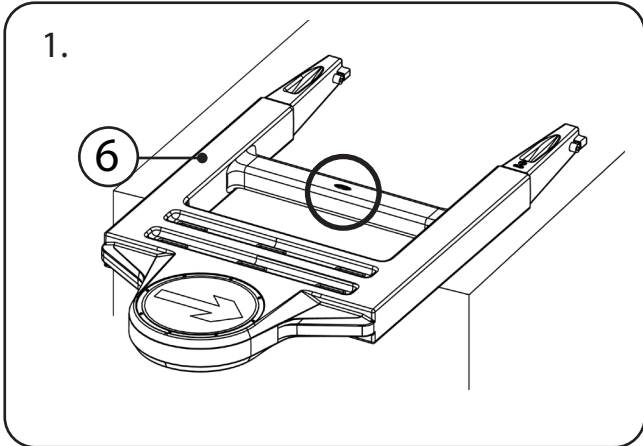
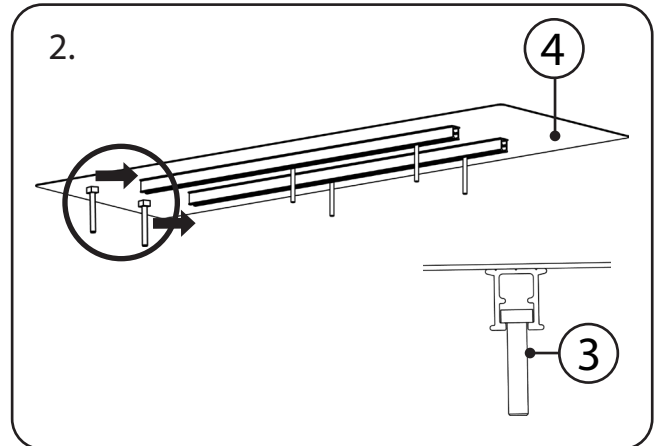


DIAGRAM NOT TO SCALE

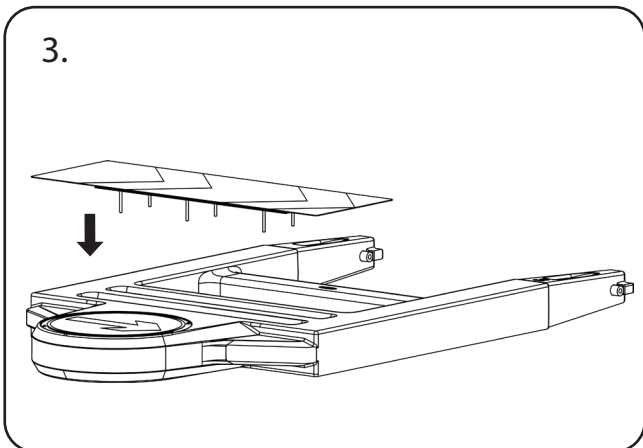
SIGNBOARD INSTALLATION INSTRUCTIONS



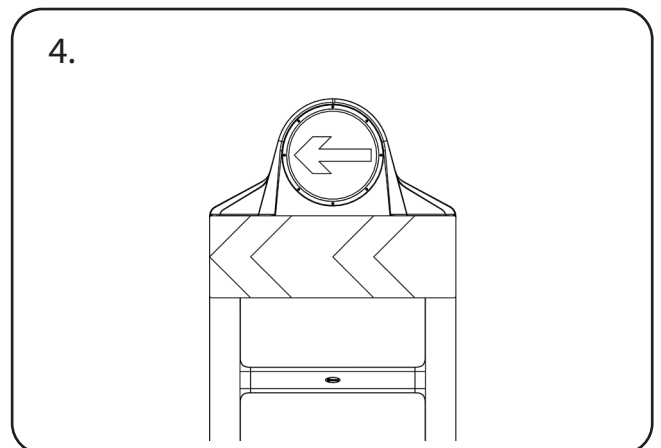
1. Lay the chevron signcarrier (ITEM 6) down face-up, on a raised, flat surface. So you have access to both sides of the signcarrier, ensure the front of the unit points upwards (Glasdon logo visible).



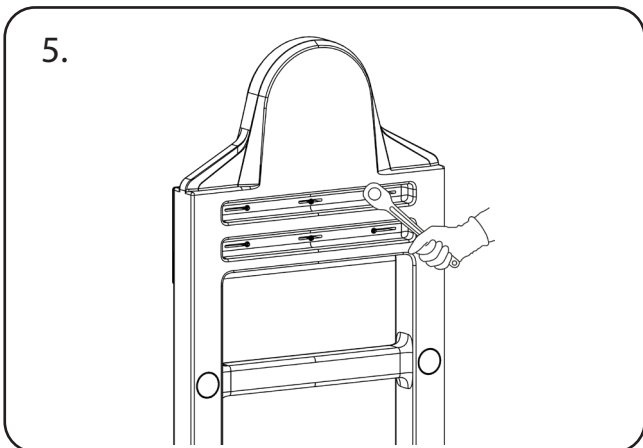
2. Slide the x6 square headed bolts (ITEM 3) along the rails on the back of the signboard (ITEM 4), using x3 bolts per rail.



3. Lower the signboard down on top of the signcarrier. Ensure the rails on the back of the signboard line up with the rail slots on the signcarrier and that the x3 bolts are inserted into each bolt slot on the signcarrier for most secure installation.



4. When fitting the standard signboard, ensure the signboard is straight and that the corners of the signboard line up with shoulders on the signcarrier before threading (ITEMS 1 & 2) over each bolt and hand tightening.



5. Return the signcarrier to its' up-right position. Fully tighten the signboard fixings using a 13mm socket.

INTERNAL SCHEMATICS

CABLE CONNECTION DIAGRAM:

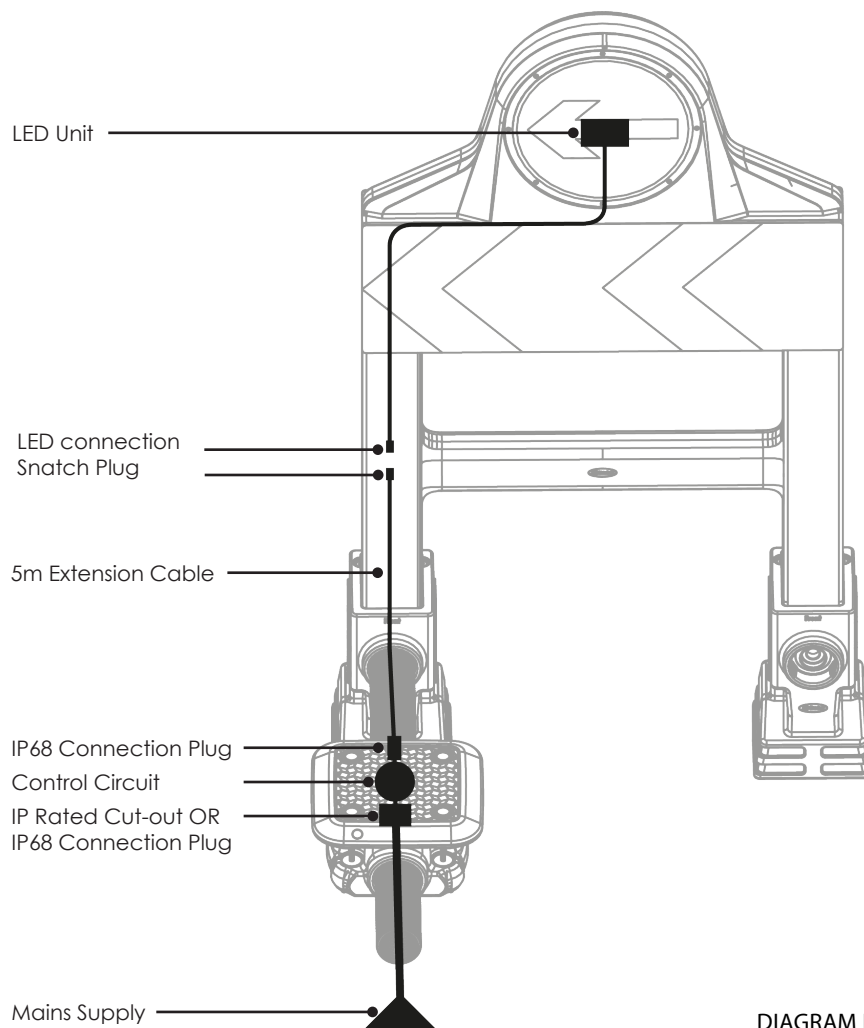


DIAGRAM NOT TO SCALE


ORBITAL INSTALLATION

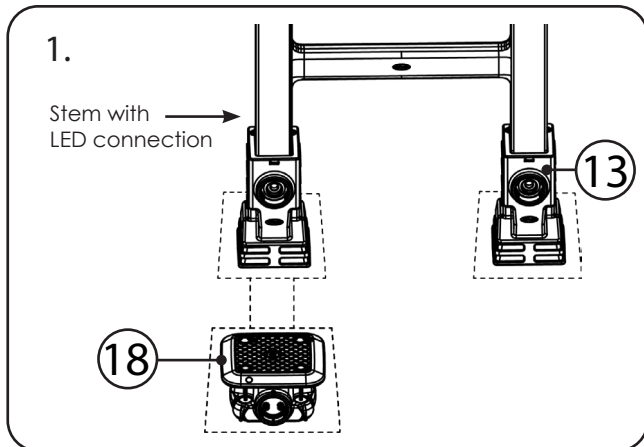
TOOLS/EQUIPMENT REQUIRED:

- Excavation Equipment
- Tape Measure
- Spirit Level
- 13mm Socket / Spanner
- Concrete Mix (we suggest using a quick setting concrete i.e. QC10 for all installations).
- Safety Equipment (hard hat, mask, goggles, reflective clothing, etc).

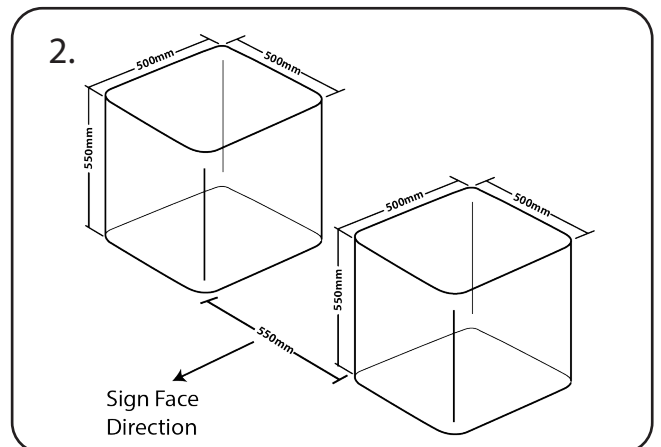
SOCKET INSTALLATION INSTRUCTIONS

TYPE 1

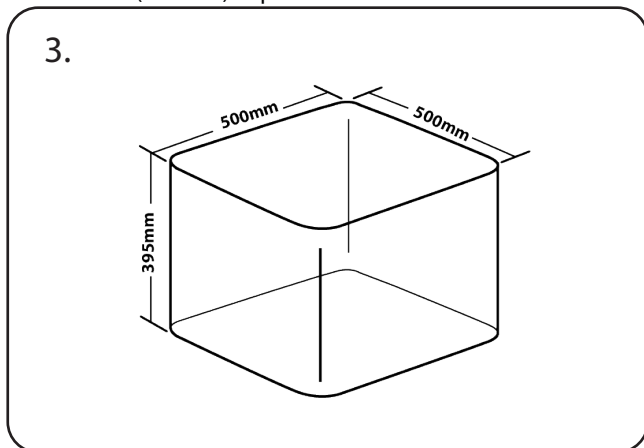
 Note: Take care to avoid buried services when excavating the holes.



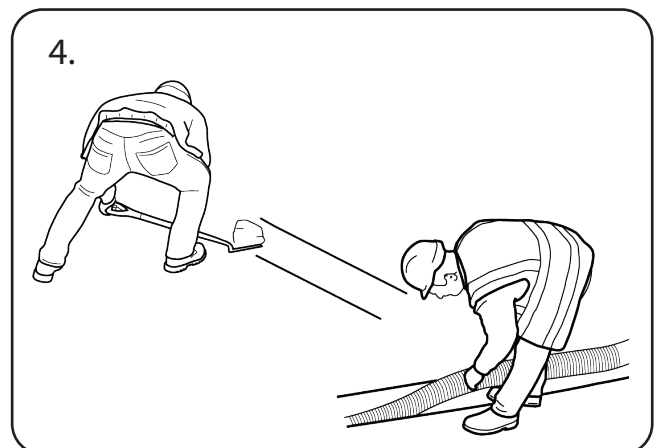
Determine the orientation of the installation. Place the signcarrier into the sockets (ITEM 13), determine where the power supply source is in relation to the installation and mark out the hole locations to suit site requirements and place the Subsate box (ITEM 18) in place.



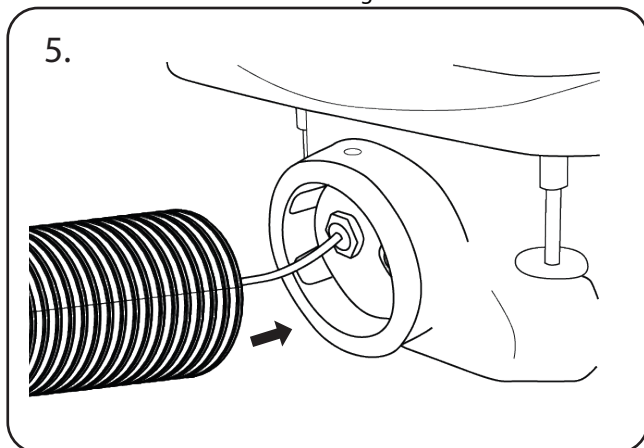
Excavate x2 holes or a trench to the above dimensions for the sockets and lay a depth of 50mm of gravel or sand in the base of the hole for drainage.



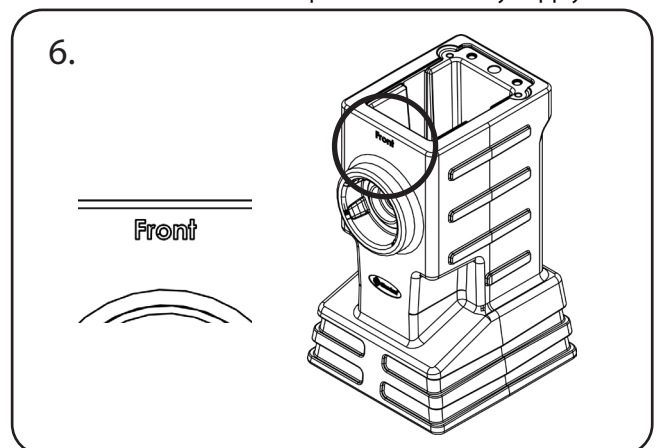
Excavate a hole for the Subsate to the above dimensions and lay a depth of 50mm of gravel or sand in the base of the hole for drainage. Adapt the excavation to suit cable entry/exit locations and duct requirements. Choose a suitable location to install the Subsate relative to the signcarrier.



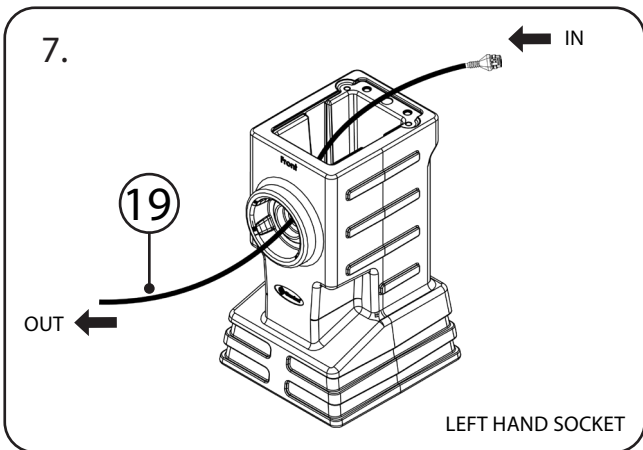
Excavate trenches and lay the required ducting. Between the Subsate and power supply source and the Subsate to the Orbital socket, thread the following cables: 1. Power supply from the source to the Subsate 2. Circuit cabling from the Subsate to the socket that requires the electricity supply.



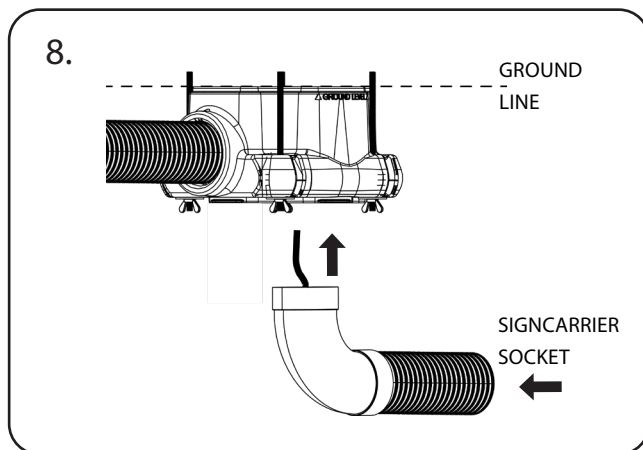
Position the Subsate box into the hole and orient to suit direction of supply. Feed the power supply cable through the ducting and into the gland, tighten well using a 13mm socket spanner and connect ducting end to unit. We recommend leaving sufficient cable inside the box to enable connection to an IP rated cutout (not supplied).



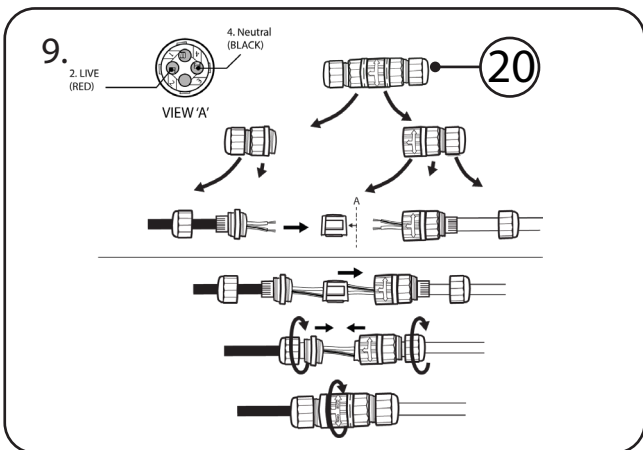
Place the sockets into the deeper excavations. Ensure the sockets are orientated correctly. The sockets should be installed with the word 'FRONT' facing oncoming traffic.



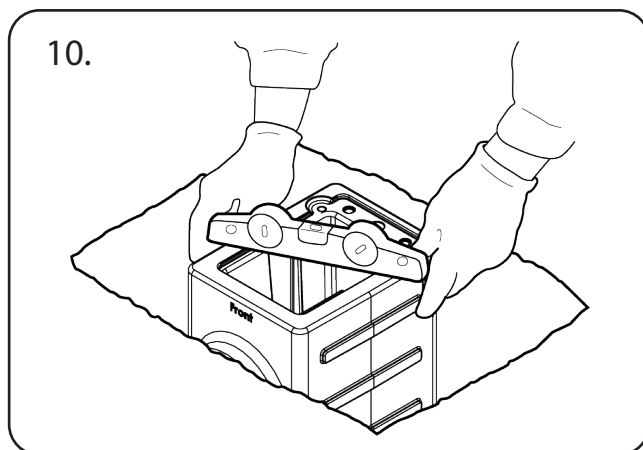
Thread the extension cable through the left hand socket and out of the connection point. We recommend attaching a piece of string around the end of the cable end to prevent it from falling through. Ensure a minimum of 2m is left on the 'IN' end to enable connection to the LED connection cable.



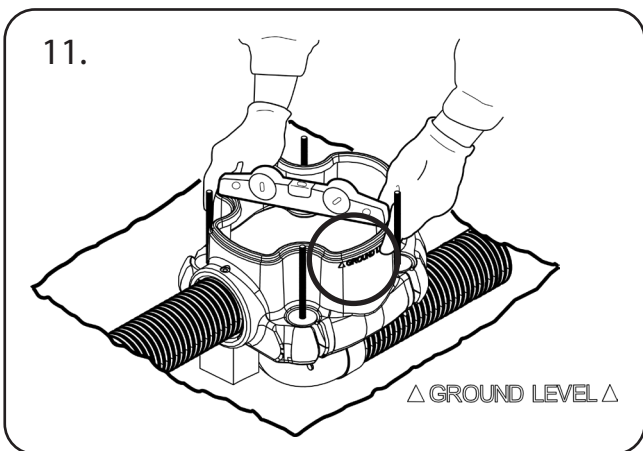
Feed cable from the socket through the ducting to the underside of the Subsafe and thread cable through the gland into the box, tighten well. Leave sufficient cable inside the box to connect to the control circuit housed on the underside of the Subsafe lid.



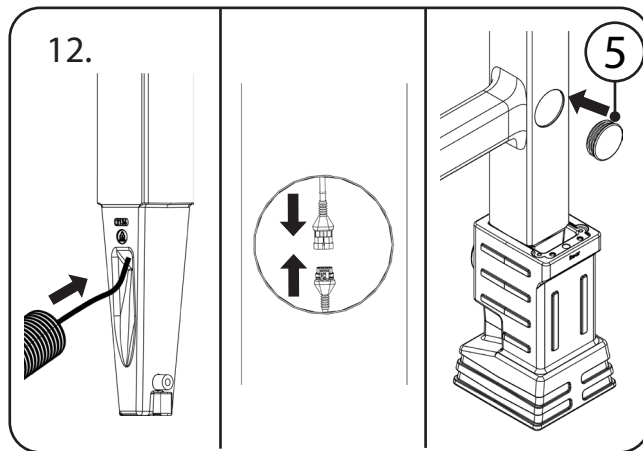
Thread one side of the IP68 rated plug (ITEM 20) onto the end of the extension cable and the other end onto the 'supply out' cable from the housed control circuit as shown above. Ensure (BLACK & RED) cables are connected to the correct pins. Connect the plugs and twist to seal.



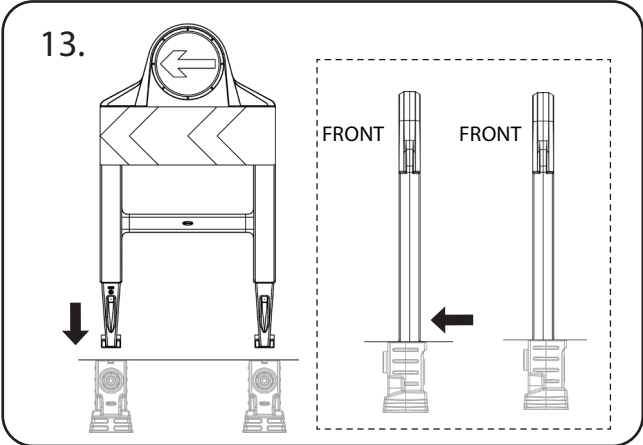
Attach the other end of the ducting into the socket. Use a spirit level to ensure the top of the sockets are level and flush with the ground. Add/remove gravel as required to level.



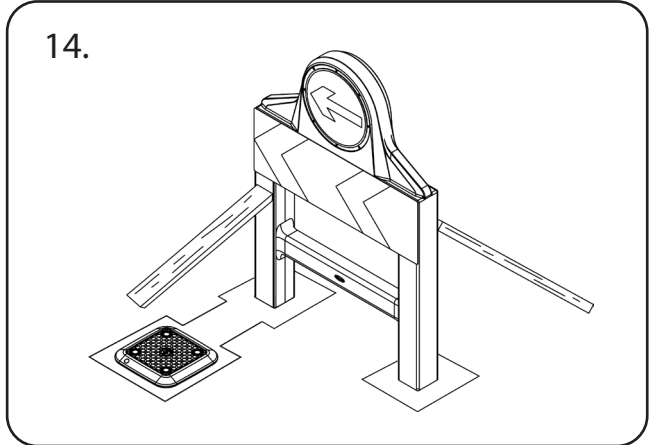
Position the box using a spirit level to ensure that the top is level with the indicator line, to provide a flush installation. Add/remove gravel as required to level. IF SUFFICIENT ROOM IS NOT LEFT THE LID WILL NOT SEAL TO THE BOX PROPERLY.



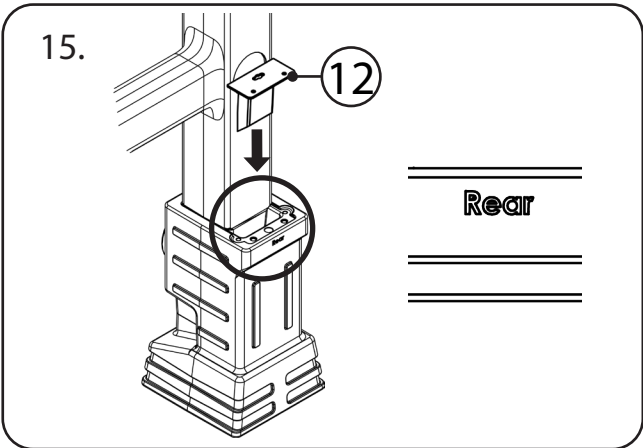
Lay the signcarrier face down with the stems as close to the sockets as possible. Feed the cable from the socket up into the left hand signcarrier stem through the small access hole until it is visible through the access hole to the rear of the signcarrier. Connect the two halves of the snatch plug together. Position the stem access plug (ITEM 5) over the hole and push in.



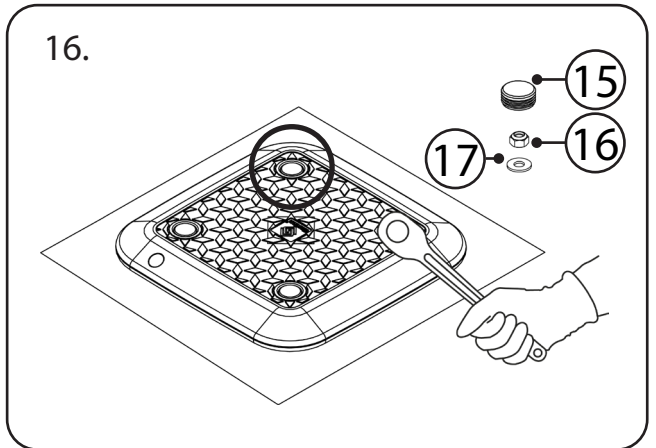
13. Insert the signcarrier into the sockets and slide forwards to lock into position. The Orbital Chevron should face forwards to match the front facing sockets.



14. Fill all excavations with concrete. Ensure concrete is flush with the top of the sockets and the fill level on the Subsafes underground box. Smooth the surface and allow concrete to dry for at least 24 hours. We recommend using quick setting concrete (QC 10) and propping up the signcarrier with spare off-cuts whilst the installation sets initially.



15. Insert the socket wedges (ITEM 12) into the REAR of each socket. Position (ITEMS 9 & 10) into each of the sockets' fixing holes and tighten fully using a 13mm socket/spanner.

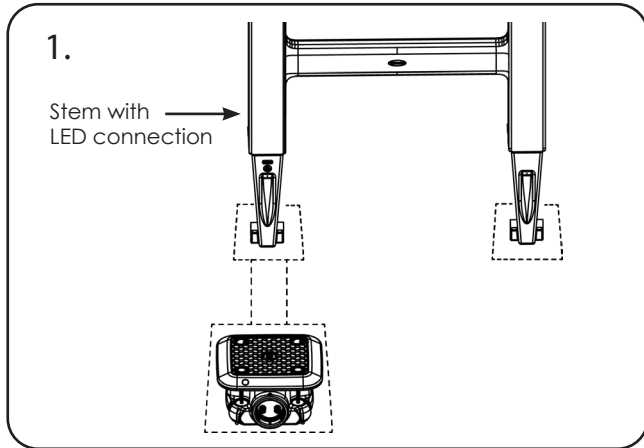


16. Turn on the power (i.e. via cut-out) and the signcarriers round signface will illuminate. Place the lid onto the Subsafes and position (ITEMS 16 & 17) into each of the Subsafes' fixings. Tighten fully using a 13mm socket/spanner. Insert a cover cap over each fixing (ITEM 15).

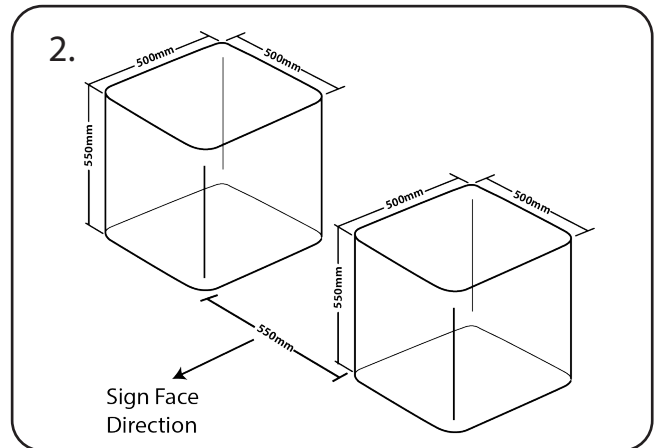
CONCRETE-IN INSTALLATION INSTRUCTIONS

TYPE 2

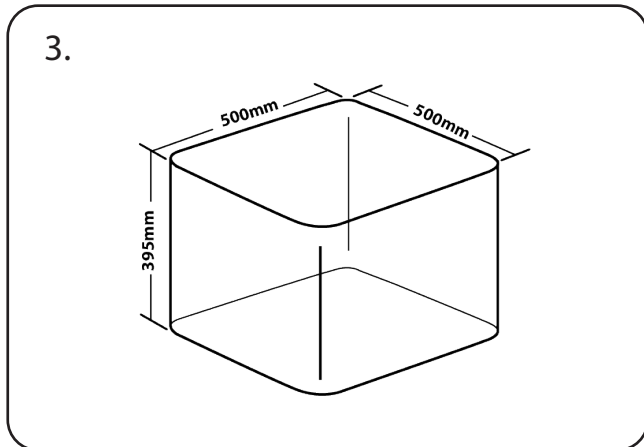
! Note: Take care to avoid buried services when excavating the holes.



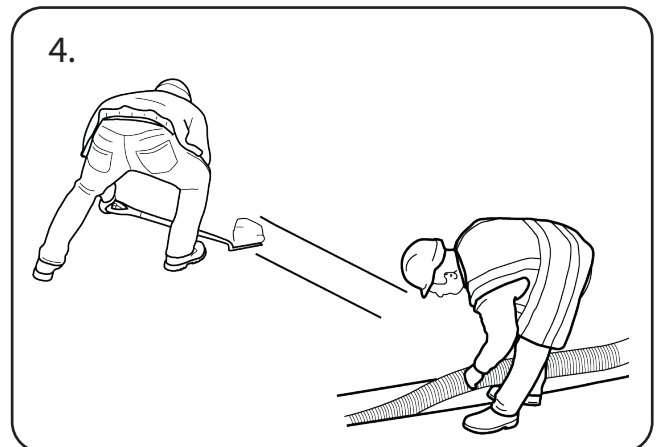
Determine the orientation of the installation. Determine where the power supply source is in relation to the installation and mark out the hole locations to suit site requirements for the Signcarrier and Subsate.



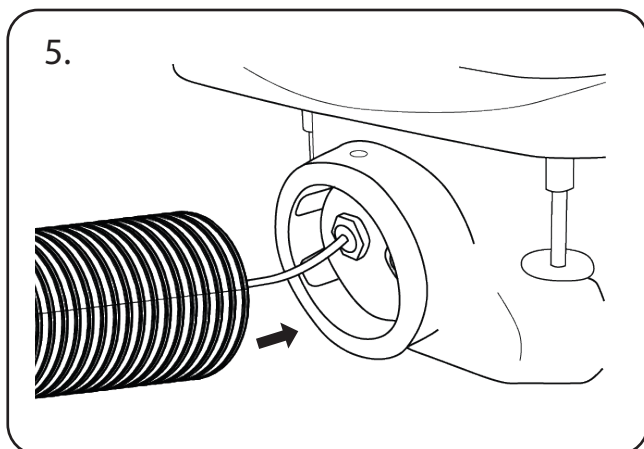
Excavate x2 holes or a trench to the above dimensions for the extended bases and lay a depth of 50mm of gravel or sand in the base of the hole for drainage.



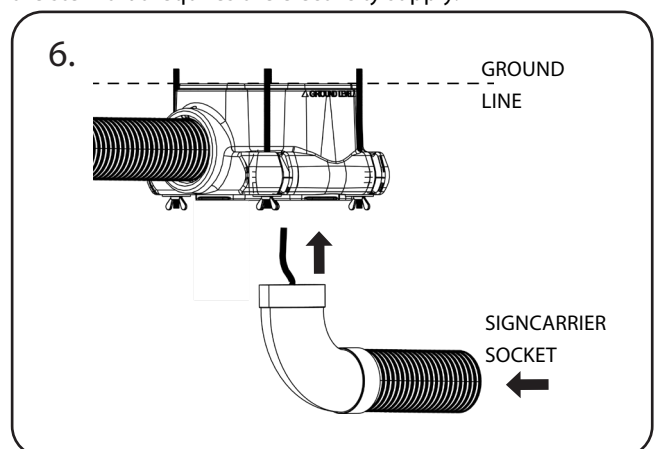
Excavate a hole for the Subsate to the above dimensions and lay a depth of 50mm of gravel or sand in the base of the hole for drainage. Choose a suitable location to install the Subsate relative to the signcarrier to suit site requirements.



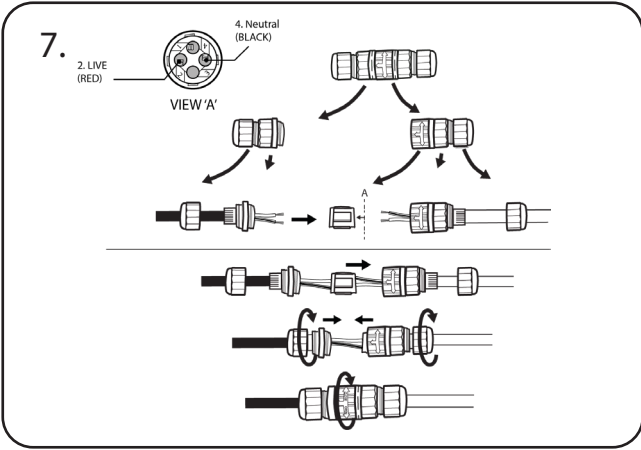
Excavate trenches and lay the required ducting. Between the Subsate and power supply source and the Subsate to the Orbital stem, thread the following cables: 1. Power supply from the source to the Subsate 2. Circuit cabling from the Subsate to the stem that requires the electricity supply.



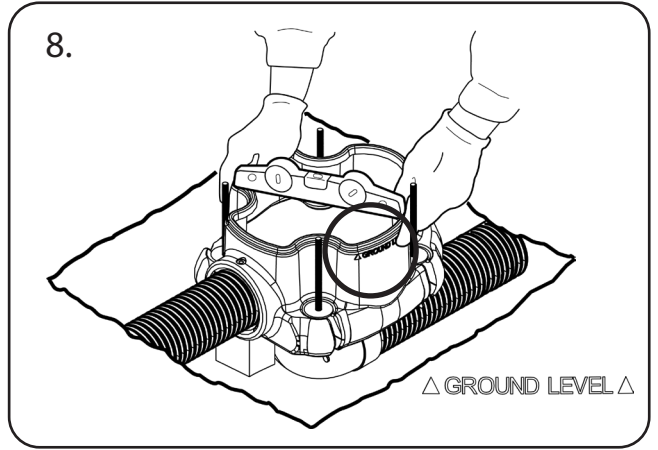
Position the Subsate box into the hole and orient to suit direction of supply. Feed the power supply cable through the ducting and into the gland, tighten well and connect ducting to unit. We recommend leaving sufficient cable inside the box to enable connection to an IP rated cutout (not supplied).



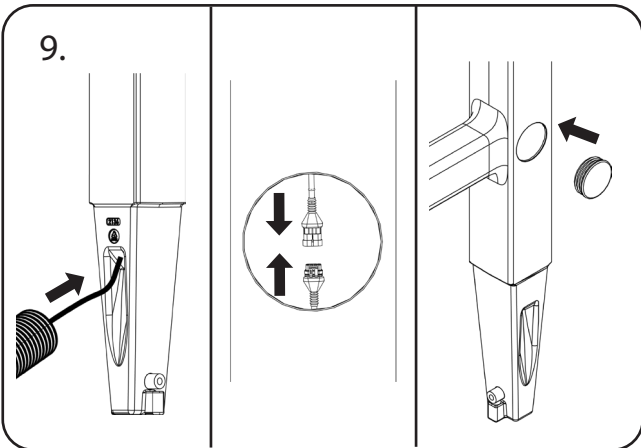
Feed the extension cable through the ducting to the underside of the Subsate and thread the cable through the gland into the box, tighten well. Leave sufficient cable inside the box to connect to the control circuit housed on the underside of the Subsate lid.



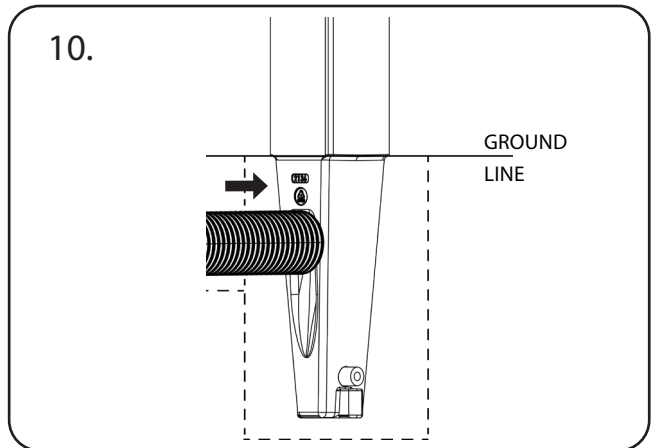
Thread one side of the IP68 rated plug onto the end of the extension cable and the other end onto the 'supply out' cable from the housed control circuit as shown above. Ensure (BLACK & RED) cables are connected to the correct pins. Connect the plugs and twist to seal.



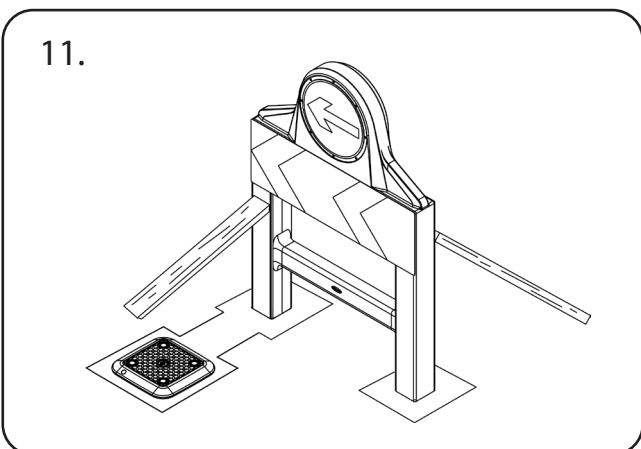
Position the box using a spirit level to ensure that the top is level with the indicator line, to provide a flush installation. Add/remove gravel as required to level. IF SUFFICIENT ROOM IS NOT LEFT THE LID WILL NOT SEAL TO THE BOX PROPERLY.



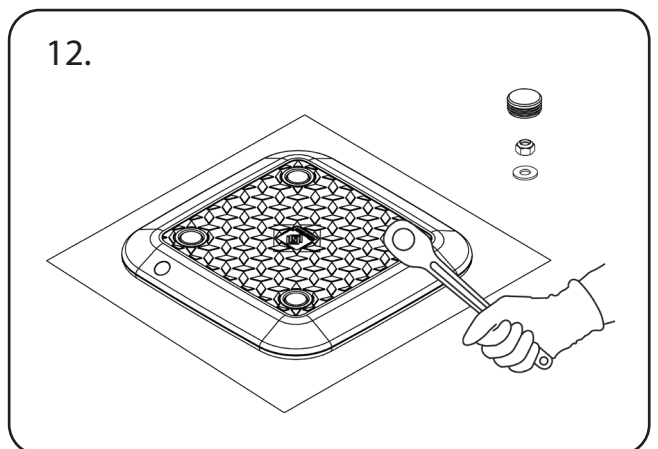
Lay the signcarrier face down with the stems as close to the excavation as possible. Feed the other end of the extension cable into the left hand signcarrier stem through the small access hole until it is visible through the access hole to the rear of the signcarrier. Connect the two halves of the snatch plug together. Position the stem access plug (ITEM 5) over the hole and push in.



Place the signcarrier into the hole, position the ducting up to the left hand stem. Add / remove gravel as required to help position the signcarrier at the correct height. Use a spirit level to ensure the top of the signboard is level with the ground and the signcarrier is vertical.



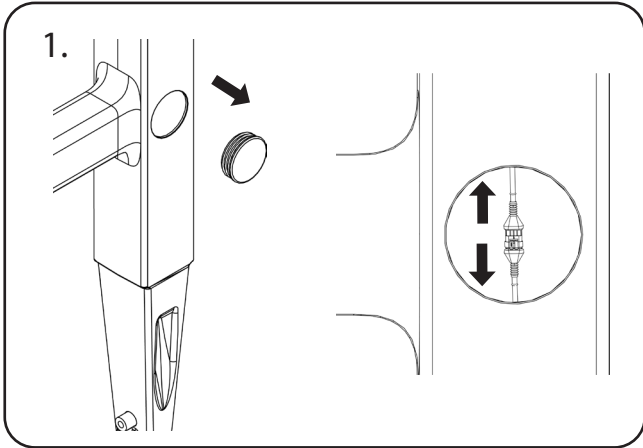
Fill all excavated holes with concrete. Ensure concrete is flush with the ground level indicator of the Subsafe and the top of the stems. Smooth the surface and allow concrete to dry for at least 24 hours. We recommend using quick setting concrete (QC 10) and propping up the signcarrier with spare off-cuts whilst it sets.



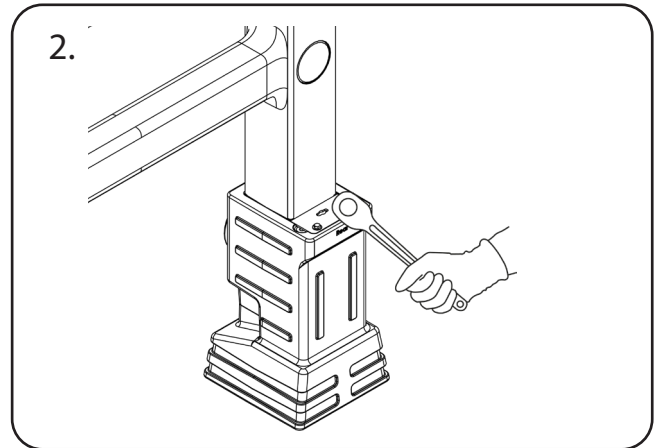
Turn on the power (i.e. via cut-out) and the signcarriers round signface will illuminate. Place the lid onto the Subsafe and position (ITEMS 16 & 17) into each of the Subsafe's fixings. Tighten fully using a 13mm socket/spanner. Insert a cover cap over each fixing (ITEM 15).

OPERATOR INSTRUCTIONS

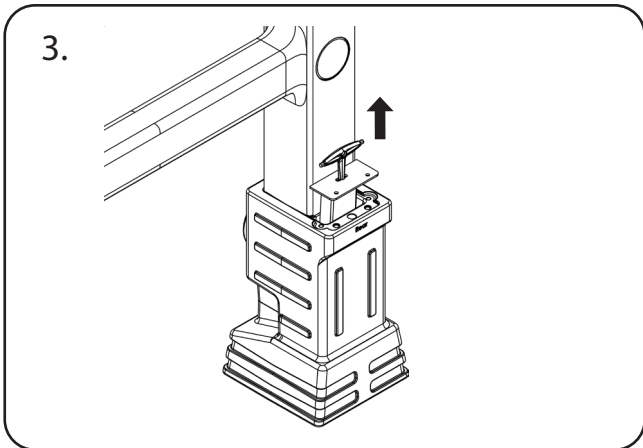
CHEVRON SIGNCARRIER REMOVAL (SOCKET VERSION)



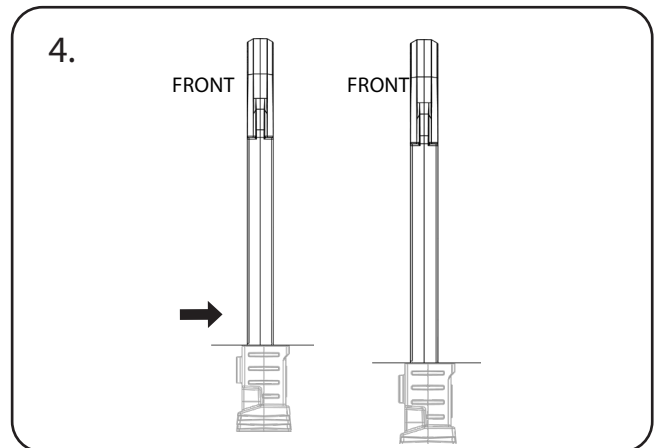
1. Turn off supply at cut-out (if applicable). Remove the cover cap from the relevant stem and disconnect the snatch plug inside.



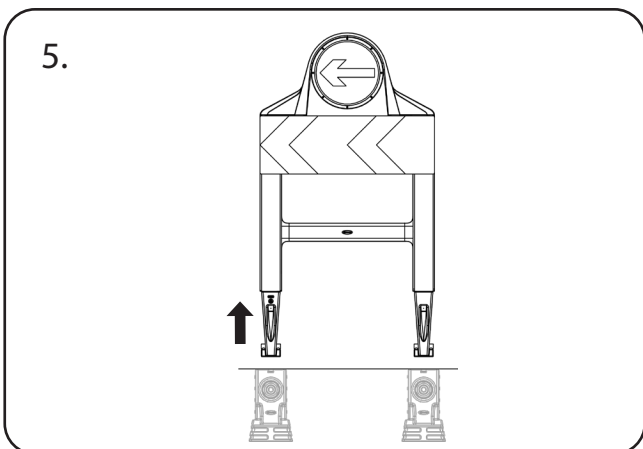
2. Use a 13mm socket/spanner to untighten the 2x fixing bolts. Remove the fixings.



3. To remove socket wedges, fully insert the Glasdon key into key track, twist slightly to allow the wings of the key to grip the underside of the keyhole and pull the wedges out from each socket.



4. Push / slide the signcarrier back in the sockets.



5. Lift the signcarrier out from the sockets. Take care when removing the cable and snatch plug from the stem before moving the signcarrier away.

CLEANING AND MAINTENANCE

Hand wash with a 10% solution of mild detergent in warm water using a soft bristle brush followed by a rinse with clean water.

CAUTION:

Many graffiti removers can damage stickers.


Use only on the areas of the Impactapol or Durapol affected and do not use on sign face.

Felt tip pen or paint may be removed from Impactapol and Durapol using a proprietary graffiti remover. Carefully follow the manufacturers instructions, particularly the guidelines covering safety and protective equipment during use. Ensure that all traces of chemicals are removed once the graffiti has been erased, then clean as detailed above.

Regular inspection is recommended and components replaced when necessary.

IMPORTANT NOTE: PLEASE ENSURE THAT ALL RELEVANT PERSONNEL READ THE POINTS LISTED WITHIN THIS LEAFLET AND THAT A COPY IS GIVEN TO STAFF INVOLVED WITH THE INSTALLATION AND MAINTENANCE OF THIS PRODUCT.

SAFETY NOTE: PLEASE REFER TO 'THE MANUAL HANDLING OPERATIONS REGULATIONS 1992' DURING HANDLING.

 **Glasdon**, ORBITAL, LOCKFAST, SUBSAFE ARE TRADEMARKS OR REGISTERED TRADEMARKS OF GLASDON GROUP OR ITS SUBSIDIARIES IN THE U.K. AND OTHER COUNTRIES.

- A planned maintenance schedule or regular inspection is recommended, replacing components as necessary.
- Replacement components are available direct from GLASDON.
- GLASDON cannot be held responsible for claims arising from incorrect installation, unauthorised modifications or misuse of the product.

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