


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** AND GLASDON MANCHESTER ARE TRADEMARKS OR REGISTERED TRADEMARKS OF GLASDON GROUP OR ITS SUBSIDIARIES IN THE UK 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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 **Glasdon**
Glasdon U.K. Limited
Preston New Road
BLACKPOOL
Lancashire
FY4 4JL
Tel: (01253) 600410
Fax: (01253) 792558
e-mail: sales@glasdon-uk.co.uk
web: www.glasdon.com



Glasdon Manchester™ Bollard

Installation and Maintenance Instructions

ENSURE THAT PERSONNEL CARRYING OUT THIS INSTALLATION HAVE THE RELEVANT QUALIFICATIONS/ CERTIFICATES. 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.

GLASDON RECOMMENDS THAT A FULL HEALTH AND SAFETY ANALYSIS IS CARRIED OUT PRIOR TO INSTALLATION.

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 IS CARRIED OUT PRIOR TO INSTALLATION.

EXTENDED BASE KIT CONTENTS:

ITEM 1: Key Hole Plug	x1
ITEM 2: Bollard	x1
ITEM 3: Socket Key	x1
ITEM 4: Anchor Pin	x1

LOCK FAST SOCKET KIT CONTENTS:

ITEM 1: Key Hole Plug	x1
ITEM 2: Bollard	x1
ITEM 3: Socket Key	x1
ITEM 5: Lock Fast Socket	x1

EQUIPMENT REQUIRED:

1. Excavation Equipment
2. Tape Measure
3. Spirit Level
4. Concrete Mix (we suggest using a quick setting concrete i.e. QC10 for all installations).
5. Safety Equipment (hard hat, mask, goggles, reflective clothing, etc).

OPTIONAL INSTALLATION/ BLANKING PLATE (SEE PAGE 5):

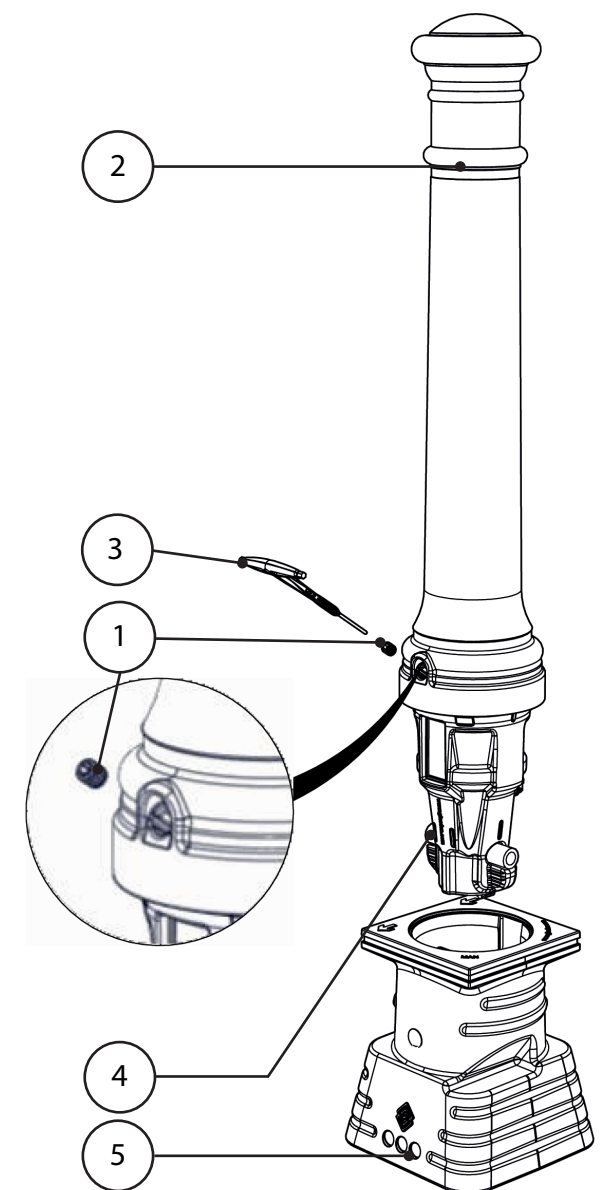
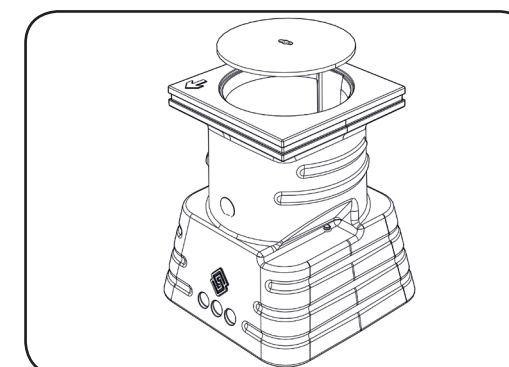
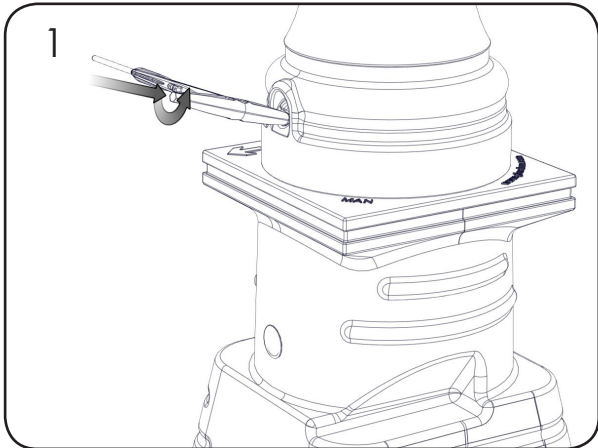
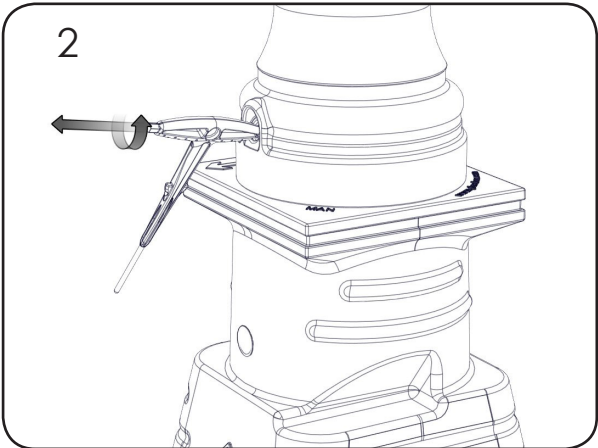


DIAGRAM NOT TO SCALE

SOCKET KEY HOLE PLUG
TO REMOVE:

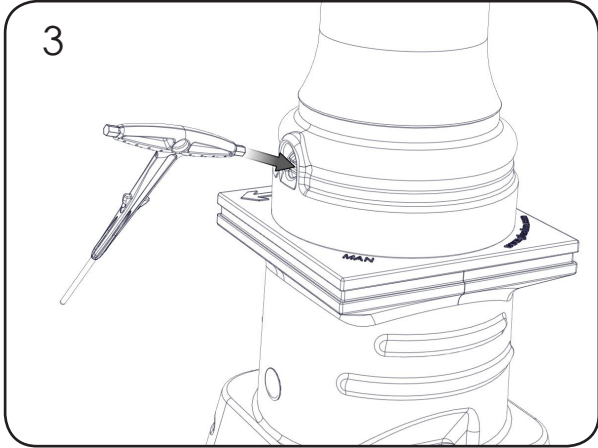


To remove the key hole plug (ITEM 1) from the bollard (ITEM 2) insert the hexagonal end of the socket key (ITEM 3) into the hexagonal hole in the key hole plug.

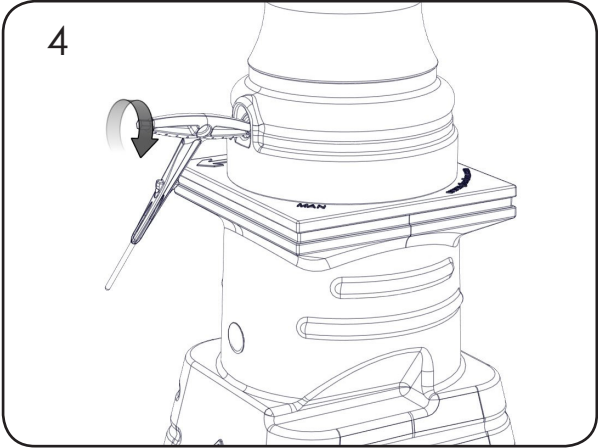


Unscrew the key hole plug by turning the socket key anti-clockwise until the plug is removed.

TO INSERT:



To insert the key hole plug, place on to the hexagonal end of the socket key and place in the hole.



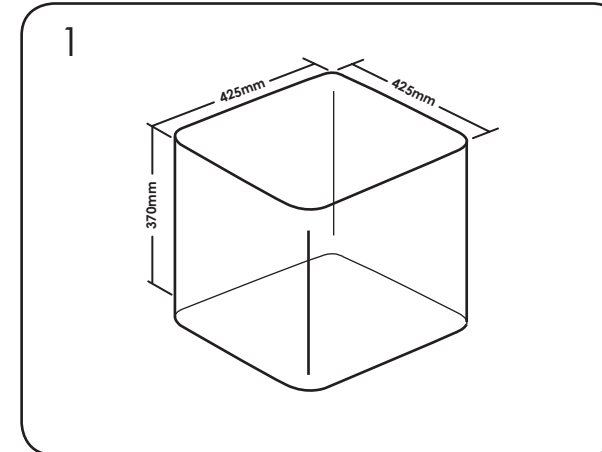
Turn the socket key clockwise until the key hole plug is secure.

BLANK

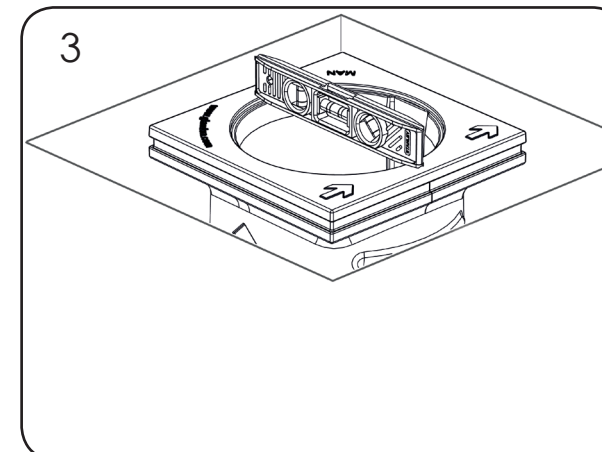
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INSTALLATION INSTRUCTIONS - LOCKFAST SOCKET

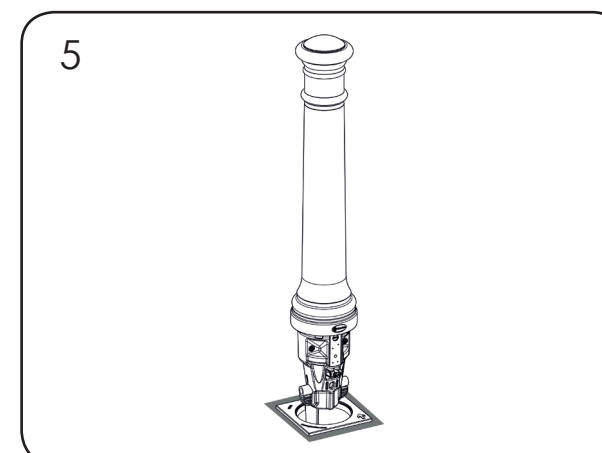
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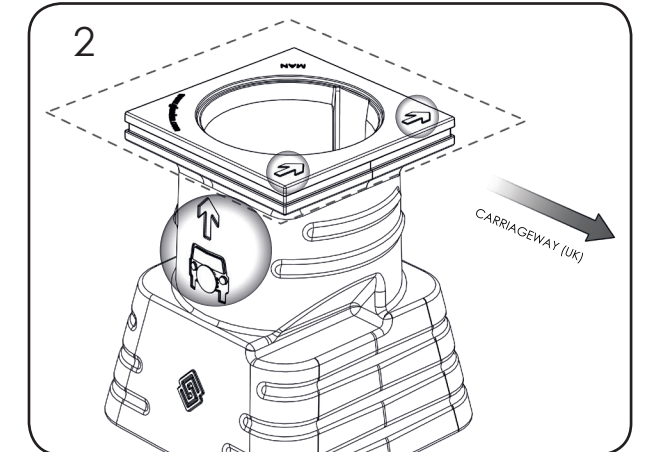
Check for buried services before starting installation. Excavate the hole to the above dimensions and lay gravel or sand in the base of the hole for drainage.



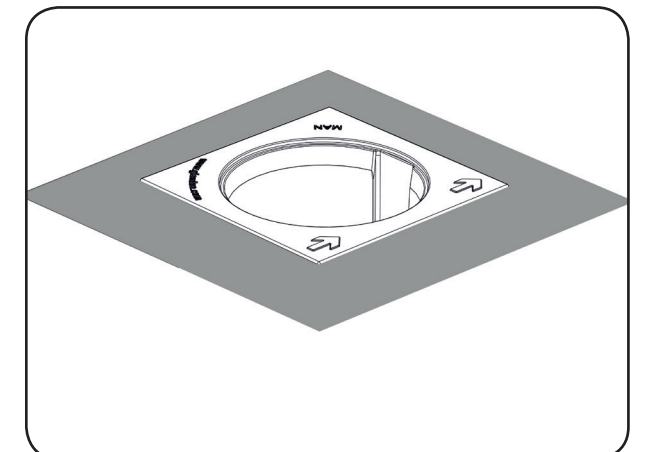
Use a spirit level to ensure the top of the socket is level and flush with the ground. Add/remove gravel as required to level.



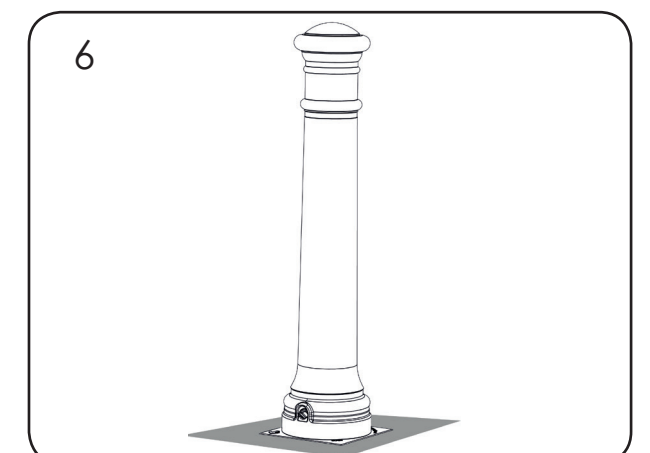
Insert the bollard into the socket and twist 90 degrees clockwise to lock in position (the bollard should not be able to turn without unlocking using the key).



Position the socket into the hole. Ensure the socket is orientated correctly. The socket should be installed with the traffic direction arrows pointing in the direction of traffic on the nearside of the carriageway.



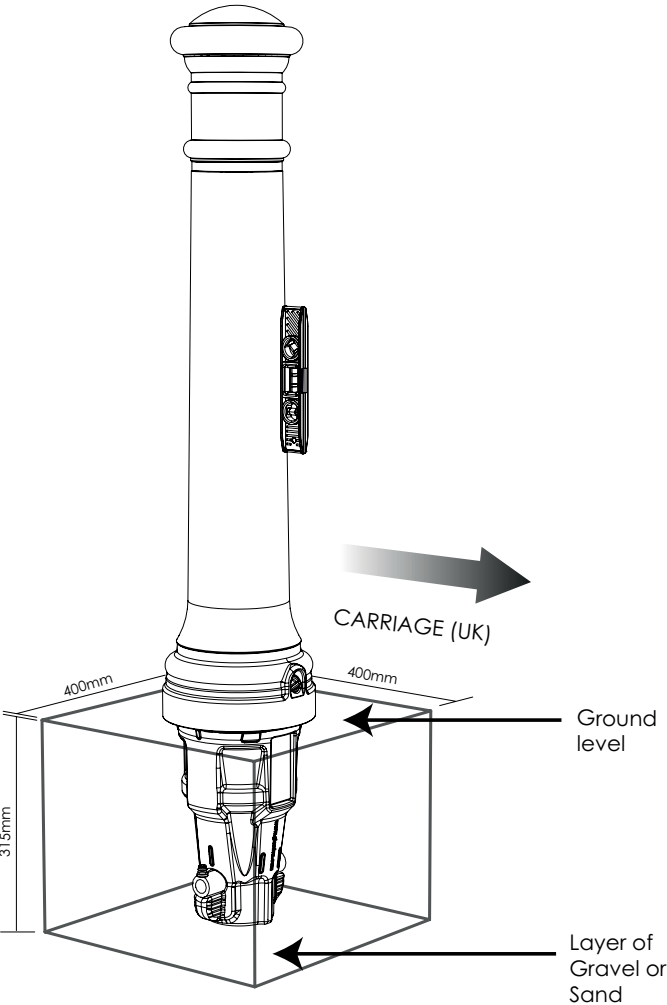
Fill the hole with concrete. Ensure concrete is flush with the top of the socket. Smooth the surface and allow concrete to dry for at least 24 hours. We recommend using quick setting concrete (QC 10). Insert the bollard into the socket to check it is upright and straight.



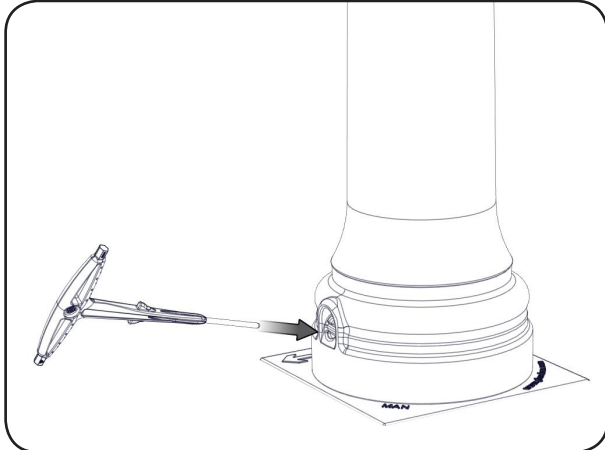
Replace Lock Cover Cap using the socket key (see 'Socket Key Hole Plug' steps 3&4).

INSTALLATION INSTRUCTIONS - CONCRETE IN **SEE OUR WEBSITE FOR A VIDEO GUIDE - www.glasdon.com**

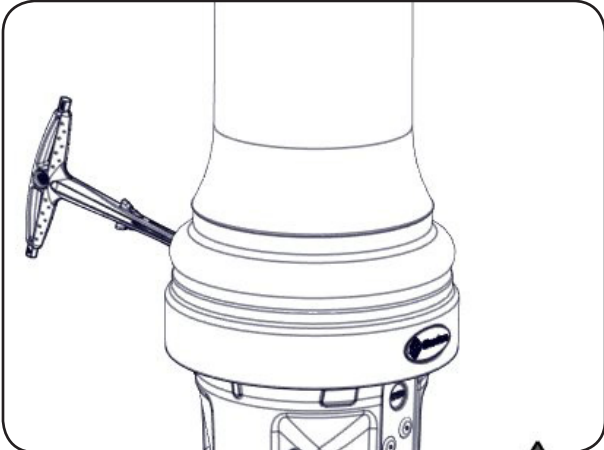
1. Check for buried services before starting excavations.
2. Mark out and prepare a hole 400mm x 400mm x 315mm deep.
3. Place a small amount of gravel or sand in the base of the prepared hole and position bollard into the hole. Add/remove gravel as required to help position the post at the correct height.
 - Ensure the top of the bollard stem is level with the ground.
 - Ensure the bollard is vertical with the use of a spirit level.
 - Ensure the bollard is orientated correctly with regard to the retroreflective banding and the site requirements. (i.e. Red reflector faces on coming traffic on the near-side and white on the off side).
4. Once the bollard is positioned correctly pour concrete into prepared hole to the ground level.
5. Should block paving be required reduce the height of the concrete accordingly to allow the paving to be sited at ground level.
6. Ensure the bollard remains vertical during the concrete setting period. Leave to set.



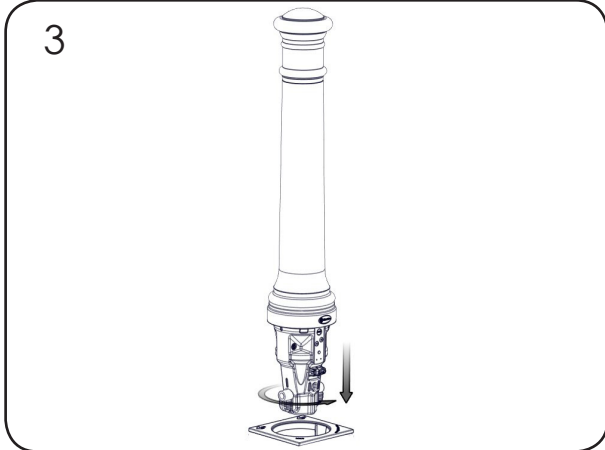
OPERATOR INSTRUCTIONS



Remove the key hole plug by following step 1 & 2 of 'Socket Key Hole Plug' instructions. To remove the bollard locate the lock hole and fully insert the key.



Firmly push the key into the track, turn 90 degrees and lift to remove the bollard from the socket.

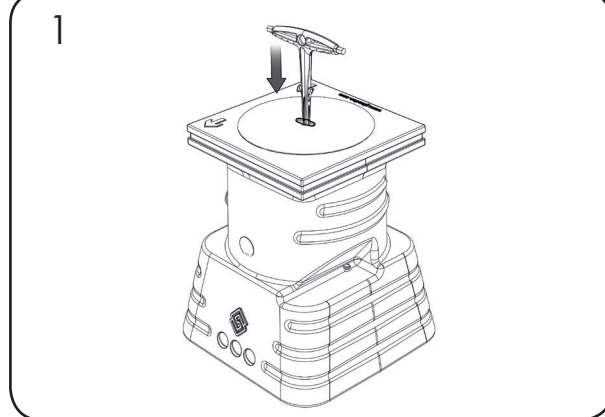


To lock the bollard in place, drop it into the socket. Ensure the bollard is orientated correctly with regard to the retroreflective banding and the site requirements (i.e. Red reflector faces oncoming traffic on the nearside and white reflector faces oncoming traffic on the off-side).

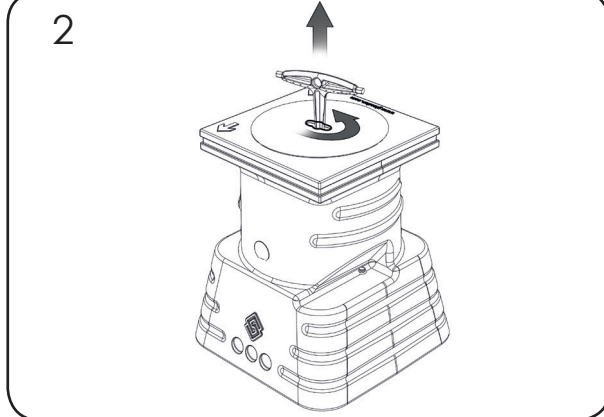


Ensure the bollard is locked by attempting to twist out. Insert the security hole plug by following step 3 & 4 of 'Sock Key Hole Plug' instructions.

OPTIONAL BLANKING/INSTALLATION PLATE



To install, insert socket key into the shaped hole in the plate. Push down and turn socket key clockwise 45 degrees (until tight) to lock.



To remove, insert socket key into the shaped hole in the plate. Twist the socket key anti-clockwise 45 degrees to unlock. Then lift the plate using the key.