

**Solar Panel mounting bracket
installation manual**



**Solar
Panel
Mounting
Bracket**

**SOLAR
PANEL
ACCESSORY**

Company Profile



1986

1990

1995

1999

Centurion Systems
today

**In-house
R & D
development
team**



**Manufacture to
international
quality standard
ISO 9001:2008**



**100%
testing of
products**



**Competent
after-sales
technical support**



**Sales and support throughout
Southern Africa and over
50 countries worldwide**



CENTURION SYSTEMS (Pty) Ltd. reserves the right to make changes to the products described in this manual without notice and without obligation of CENTURION SYSTEMS (Pty) Ltd. to notify any persons of any such revisions or changes. Additionally, CENTURION SYSTEMS (Pty) Ltd. makes no representations or warranties with respect to this manual. No part of this document may be copied, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, optical or photographic, without the express prior written consent of CENTURION SYSTEMS (Pty) Ltd.

Contents



IMPORTANT SAFETY INSTRUCTIONS

page 1

1. General description page 2
2. Icons used page 3
3. Product identification Page 4
4. Required tools Page 6
5. Site considerations Page 6
6. **Solar Panel Mounting Bracket** installation procedure page 7
 - Mounting onto a wall Page 7
 - Mounting onto a post Page 9
 - Fitting the optional Gooseneck Page 10
7. Installation handover Page 13



IMPORTANT Safety Instructions

ATTENTION

To ensure the safety of people, it is important that you read all the following instructions. Incorrect installation or incorrect use of the product could cause serious harm to people.



The installer, being either professional or DIY, is the last person on the site who can ensure that the operator is safely installed, and that the whole system can be operated safely.

Warnings for the installer

CAREFULLY READ AND FOLLOW ALL INSTRUCTIONS.

Before beginning to install the product;

- Installation of the **Solar Panel Mounting Bracket** must be carried out by a suitably qualified person
- Do not in any way modify the components
- Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger
- Centurion Systems does not accept any liability caused by improper use of the product, or for use other than that for which it was intended
- This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the service life/operation of the product and/or be a source of danger
- The installer must explain the operation of the **Solar Panel Mounting Bracket** and any safety hazards to the end user. Refer to section "Installation Handover"
- **Anything not expressly specified in these instructions is not permitted.**

1. General description



FIGURE 1

The CENTURION **Solar Panel Mounting Bracket** is a robust and versatile galvanised mild steel bracket suitable for mounting either a 20W or 40W solar panel against a wall or on a post. The fixed bracket included with the kit provides limited orientation capability and can be pivoted in a number of ways in order for the panel to obtain optimum sunlight coverage.

The Gooseneck, which can be purchased as an optional accessory, allows for full flexibility, elevation and azimuth adjustment.

2. Icons used in this manual



This icon indicates tips and other information that could be useful during the installation.



This icon denotes variations and other aspects that should be considered during installation.



This icon indicates warning, caution or attention! Please take special note of critical aspects that **MUST** be adhered to in order to prevent injury.

3. Product identification

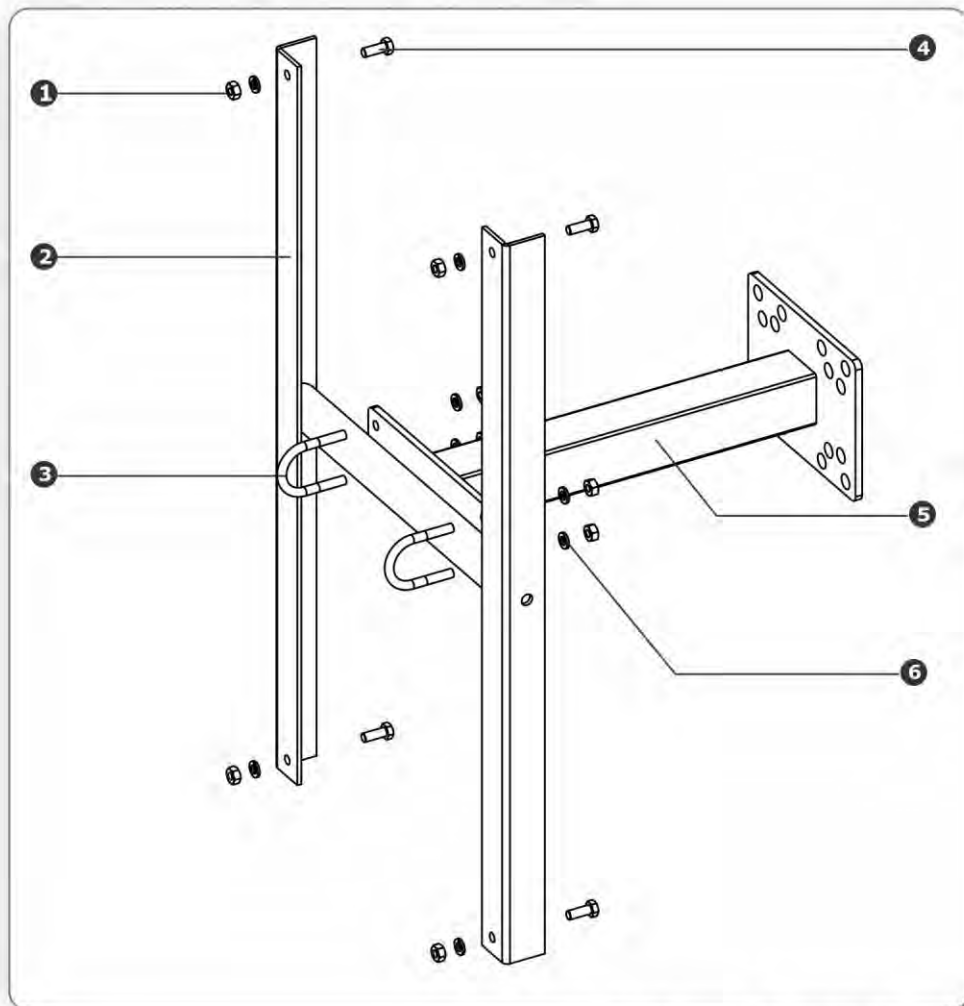


FIGURE. 2. SOLAR PANEL MOUNTING BRACKET

1. Galvanised nut full M6
2. Solar panel pivot H-bracket
3. Galvanised u-bolt M6 x 20
4. Galvanised set screw M6 x 16mm
5. Solar panel fixed bracket
6. Galvanised spring washer M6

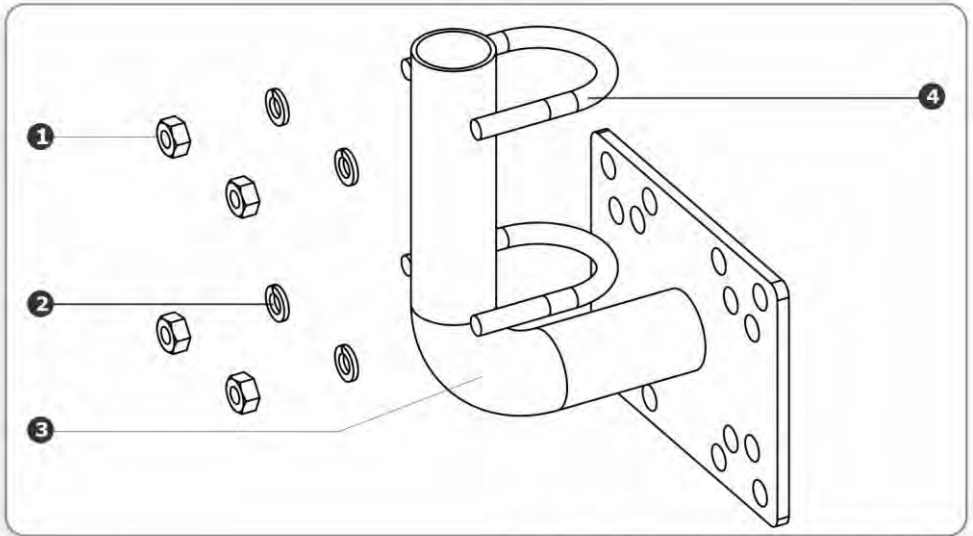


FIGURE. 3. OPTIONAL GOOSENECK BRACKET

1. M8 flat nut
2. M8 galvanised spring washer
3. Gooseneck bracket
4. M8 x 32 galvanised u-bolt

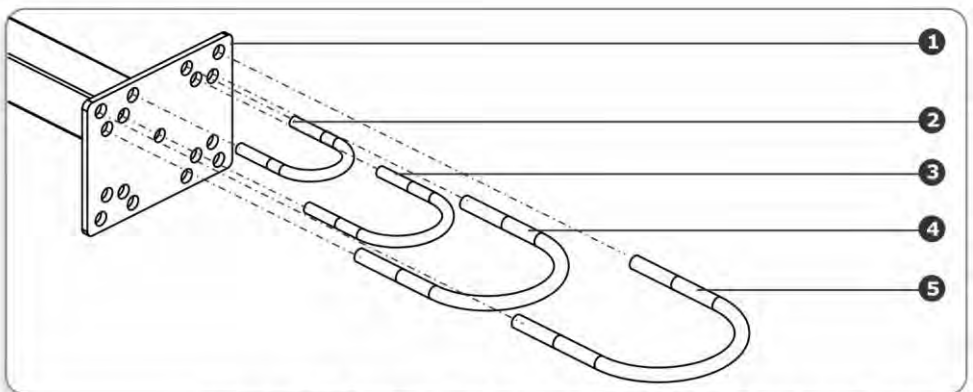


FIGURE. 4. U-BOLTS THAT CAN BE CATERED FOR BY THE FIXED BRACKET

1. Solar panel fixed bracket
2. M8 x 50 galvanised u-bolt
3. M10 x 80 galvanised u-bolt
3. M10 x 90 NB galvanised u-bolt
4. M08 x 32 galvanised u-bolt

4. Required tools

- Spanner – 10mm; 13mm; 17mm
- Marking pen/chalk
- Electric drill
- Drill bits – steel and masonry
- Cable ties

5. Site consideration

General considerations for the installation

- Decide on whether the bracket is to be mounted onto a wall or against a square or cylindrical post
- For wall-mount installations, masonry fasteners sized for a 10.5mm hole must be used.
- If the bracket is to be fitted onto a post, then refer to Figure 4 for an indication of the size of the u-bolts, washers and nuts needed. The **Solar Panel Mounting Bracket** is suitable for mounting onto posts with a width or diameter of 40mm to 100mm
- Make sure that there is enough clearance to be able to rotate the solar panel to a maximum sun exposure position

6. Solar panel mounting bracket installation procedure

Mounting onto a wall

1. Align the H-bracket in the centre of the panel and proceed to mark the location of the four mounting holes. Figure 5 provides an indication of where the holes are to be drilled.

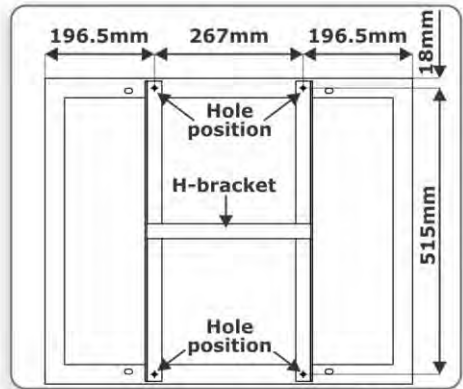


FIGURE 5

2. Remove the H-bracket and drill four 6.5mm holes in the frame of the solar panel.



Place a piece of protective material such as a length of wood or metal into the slots of the solar panel. This is to ensure that the monocrystalline face of the panel is not inadvertently damaged when the holes are drilled in the frame.

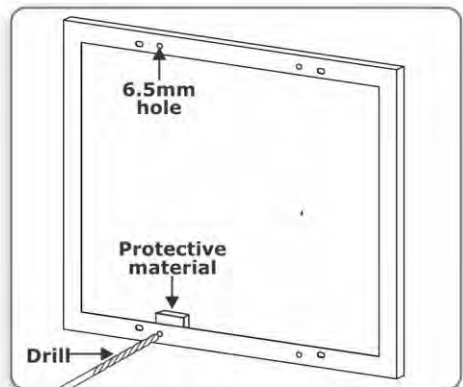


FIGURE 6

3. Secure the H-bracket onto the solar panel using the four M6 x 16 set screws supplied with the kit.

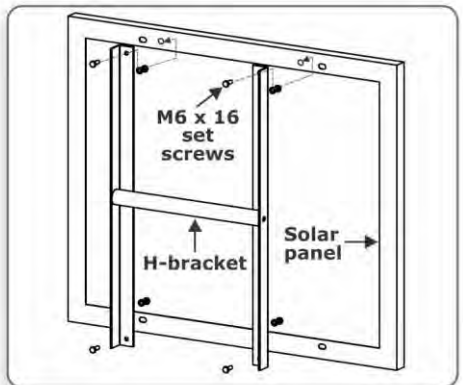


FIGURE 7

4. Use the fixed bracket as a template in order to determine where the mounting holes should be drilled in the wall.



The orientation in which the bracket is mounted onto the wall will determine the one axis of rotation! If the optimum angle cannot be obtained using the fixed bracket only, it is recommended that the additional gooseneck is purchased

5. Drill the four mounting holes.

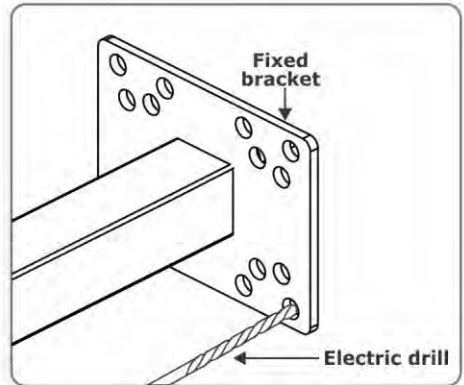


FIGURE 8

6. Place the fixed bracket onto the H-bracket crossbar and secure using the M6 x 20 u-bolts, M6 spring washers and M6 nuts provided. Use a 10mm spanner to tighten the nuts.

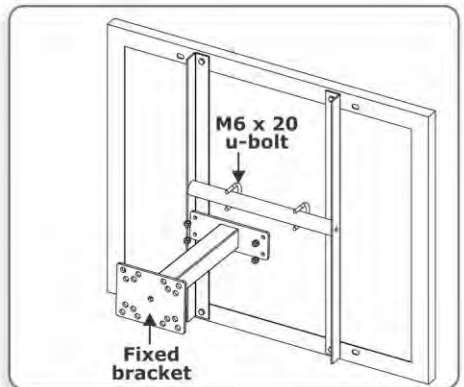


FIGURE 9

7. Use masonry fasteners (not provided) to fit the assembly to the wall or structure.
8. The panel can now be adjusted* to face the most favourable angle.

* In a single plane

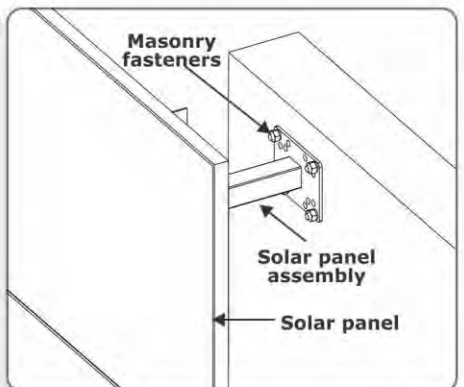


FIGURE 10

Mounting onto a Post

1. Align the H-bracket in the centre of the panel and proceed to mark the location of the four mounting holes. Figure 11 provides an indication of where the holes are to be drilled.

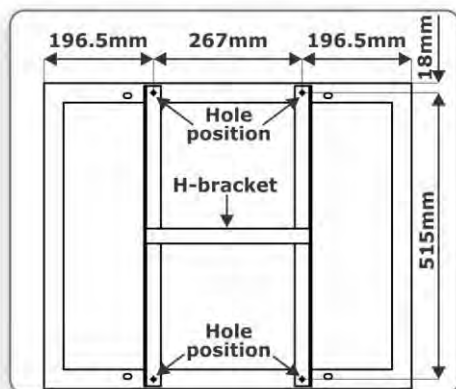


FIGURE 11

2. Remove the H-bracket and drill four 6.5mm holes in the frame of the solar panel.



Place a piece of protective material such as a length of wood or metal into the slots of the solar panel. This is to ensure that the monocrystalline face of the panel is not inadvertently damaged when the holes are drilled in the frame.

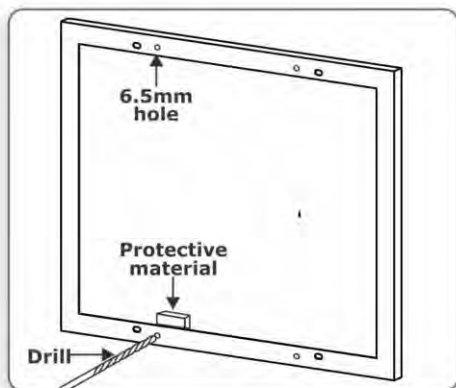


FIGURE 12

3. Secure the H-bracket onto the solar panel using the four M6 x 16 set screws supplied with the kit.

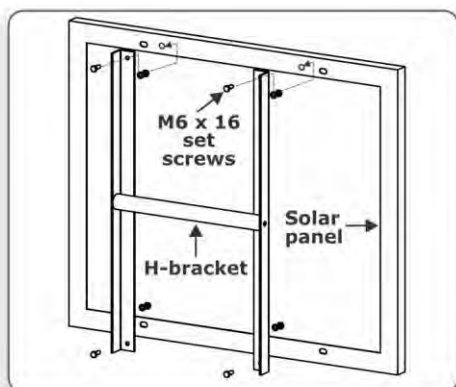


FIGURE 13

- Place the fixed bracket onto the H-bracket crossbar and secure using the M6 x 20 u-bolts, M6 spring washers and M6 nuts provided. Use a 10mm spanner to tighten the nuts.

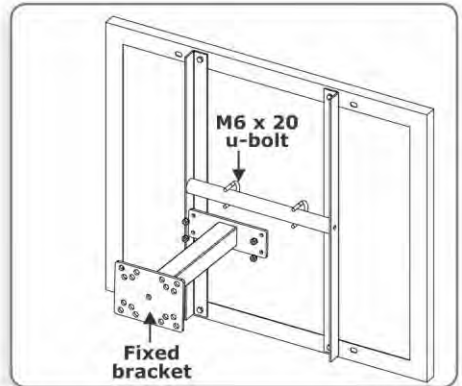


FIGURE 14

- Secure the entire assembly to the post using the appropriate size u-bolts. Refer to Figure 4 for an indication of the size of the u-bolts to be used.
- The panel can now be adjusted to face the most favourable angle.

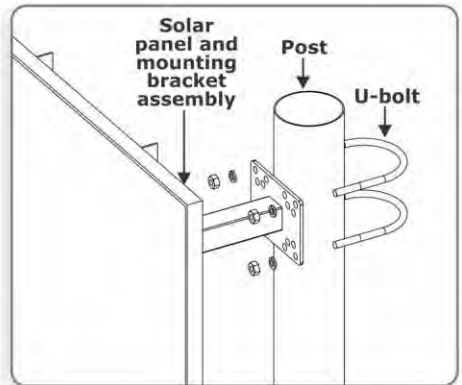


FIGURE 15

Fitting the Optional Gooseneck

- Align the H-bracket in the centre of the panel and proceed to mark the location of the four mounting holes. Figure 16 provides an indication of where the holes are to be drilled.

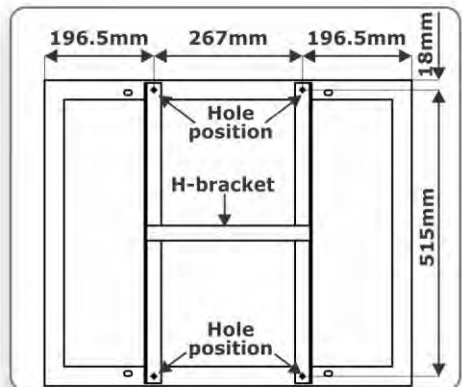


FIGURE 16

2. Remove the H-bracket and drill four 6.5mm holes in the frame of the solar panel.



Place a piece of protective material such as a length of wood or metal into the slots of the solar panel. This is to ensure that the monocrystalline face of the panel is not inadvertently damaged when the holes are drilled in the frame.

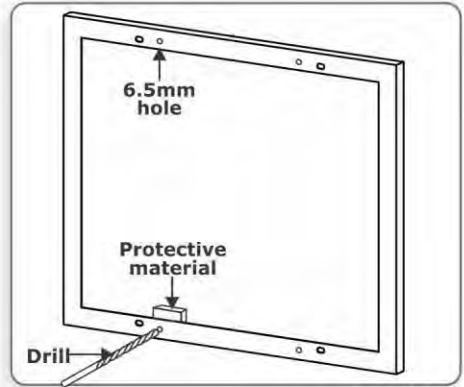


FIGURE 17

3. Secure the H-bracket onto the solar panel using the four M6 x 16 set screws supplied with the kit.

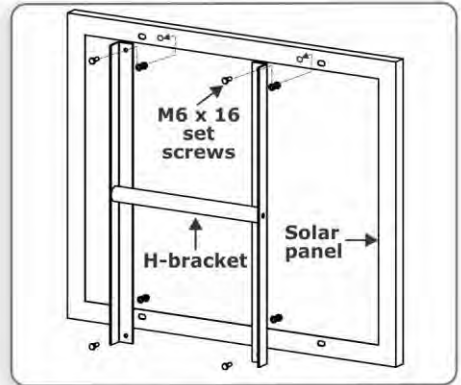


FIGURE 18

4. Place the fixed bracket onto the H-bracket crossbar and secure using the M6 x 20 u-bolts, M6 spring washers and M6 nuts provided. Use a 10mm spanner to tighten the nuts.

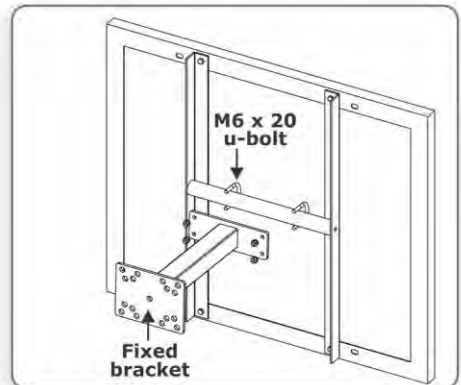


FIGURE 19

5. If the gooseneck is to be mounted onto a wall, proceed to drill holes in the desired locations and secure the bracket using masonry fasteners (not supplied).

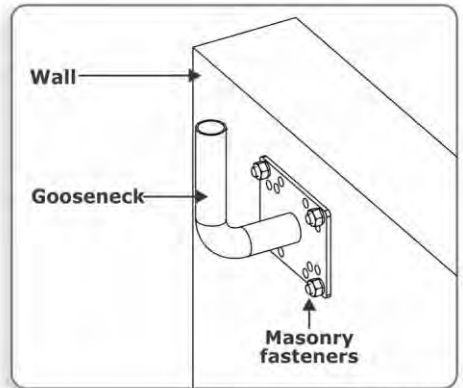


FIGURE 20

6. Alternatively, if a post (either cylindrical or square) is to be used for mounting, secure the gooseneck to the post using the appropriate size u-bolts. Refer to Figure 4 for an indication of the size of the u-bolts to be used.

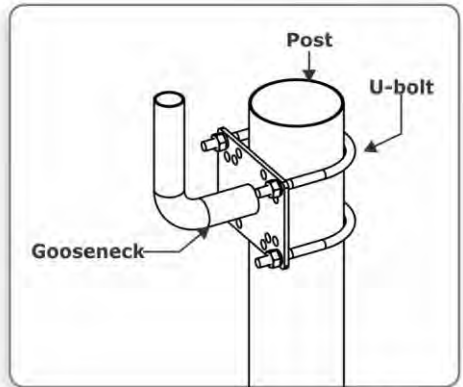


FIGURE 21

7. Fit the solar panel assembly (panel, H-bracket and fixed bracket) onto the gooseneck and secure using the supplied M8 x 32 u-bolts, M8 spring washers and M8 nuts.

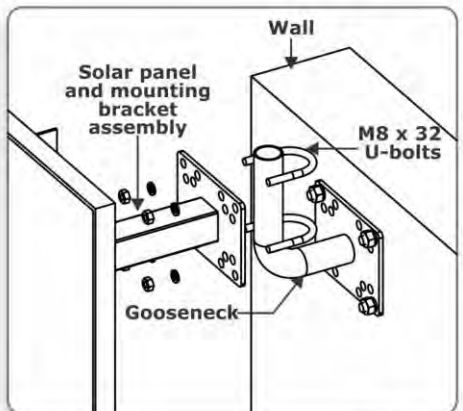


FIGURE 22

8. Fit the solar panel assembly (panel, H-bracket and fixed bracket) onto the gooseneck and secure using the supplied M8 x 32 u-bolts, M8 spring washers and M8 nuts.
9. The panel can now be adjusted to face the most favourable angle.

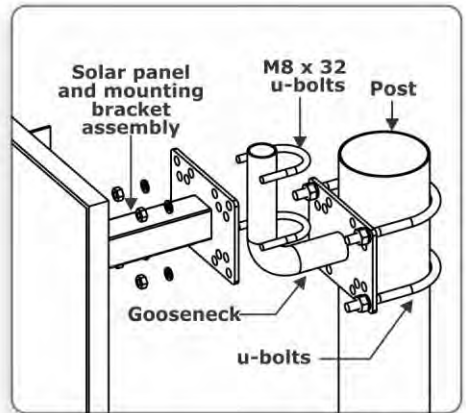


FIGURE 23

7. Installation handover

Once the **Solar Panel Mounting Bracket** has been successfully installed and its operation tested, it is important that the operation and safety considerations are explained to the end user.

Notes

M0162

Lined writing area with horizontal ruling lines.



Notes

Notes



Notes

Notes





Sharecall 0860-CENTURION (0860 236 887)
Head Office: +27 11 699 2400

Sharecall Technical Support 0861 003 123 or
+27 11 699 2481
from 07h00 to 18h00 (GMT+2)

(Sharecall numbers applicable when dialed from within South Africa only)



0.07.A.0033_22072013

www.centsys.com