

A997-0096 Revision F, October 2016

**Mounting Kit For Multi/Single 353mm (13.9") Profile Panel Antenna**  
**Antenna T-125-GL, T-126-GL, T-128-GL & F-130-GL**

**General**

This instruction sheet contains all necessary information required to assist in the correct installation of the Single & Multiband 353mm (13.8") Profile Panel Antenna using clamp brackets or U-bolts. The U-bolt kit has been designed for minimal protrusion behind the mounting pole to allow for limited azimuth panning of the antenna using the RRM kits fitted with OEM equipment mounted directly behind the antenna mounts.

Following symbols can be found next to text outlining important information.



Please follow the procedure marked with this symbol precisely. Non-compliance may lead to damage of the product.



Handy tips when installing product.

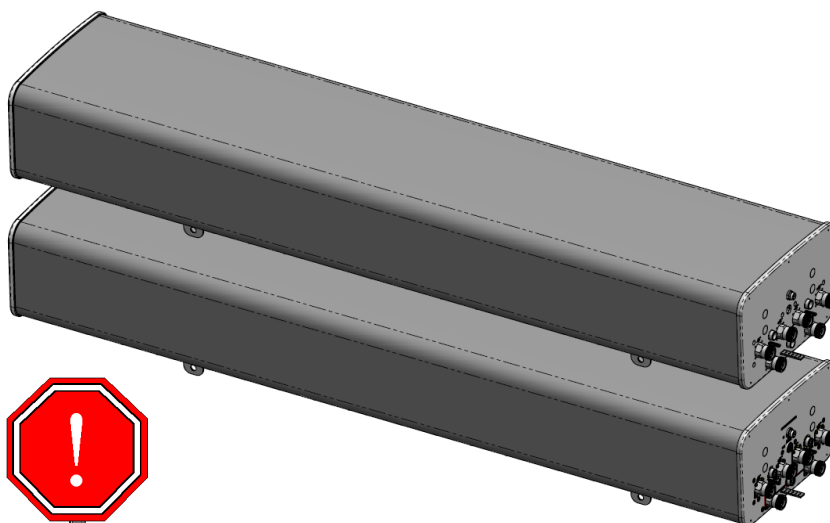
**Unpacking**

Make sure that the antenna and the accessory items listed below are provided and have not been damaged during transport.

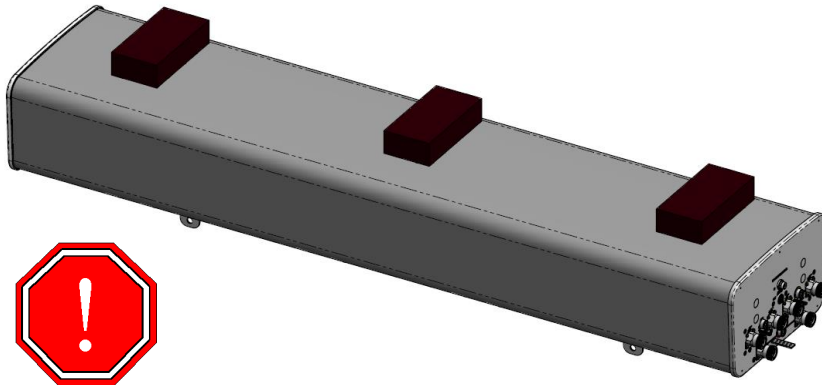
- Antenna
- Mounting kit
- Hex key 6mm AF (supplied with adjustable downtilt antennas only).

Mounting Kits	870-1200mm (34.3-47.2") Antennas	1200-1575mm (47.2-62") Antennas	1575-2700mm (62-106.3") Antennas
Fixed Downtilt	F-130-GL	F-130-GL	F-130-GL
Mechanical Downtilt	T-128-GL	T-126-GL	T-125-GL
Tilt Range	0°, 2° -10° in 1° steps	0° - 12° in 2° steps	0° - 8° in 1° steps
Mounting Bracket Spacing	716mm (28.2")	976mm (38.4")	1400mm (55.1")
Pole Diameter Range for clamp brackets	50mm (2")-115mm (4.5")	60mm (2.4")-115mm (4.5")	75mm (3")-115mm (4.5")
Pole Diameter Range for U bolts	75mm(3")-90mm(3.5")	75mm(3")-90mm(3.5")	75mm(3")-90mm(3.5")

**Table 1: Mounting Kit Part Numbers for different Antennas**



**DO NOT STACK UNPACKED ANTENNAS**



DO NOT PLACE POINT LOADS ON ANTENNA RADOME

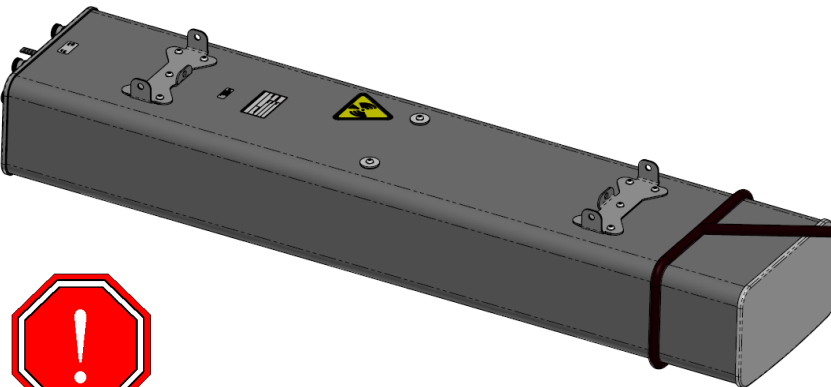
## Installation Instructions



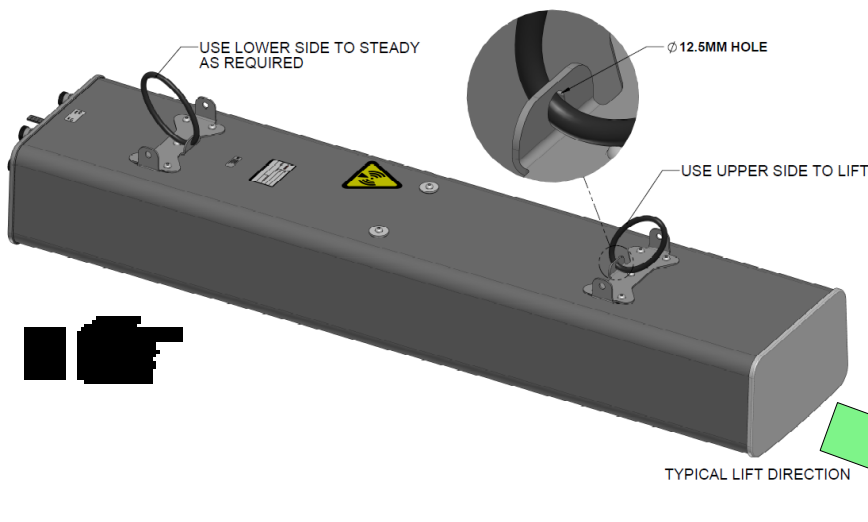
Ensure a torque spanner is used when tightening fasteners, see the mounting kit diagrams on the following pages for the correct torque recommendations.



Ensure antenna is installed with the connectors at the bottom.



DO NOT USE ROPE OR CHAIN OR SLING ATTACHMENT AROUND ANTENNA FOR LIFTING



USE MOUNTING BRACKETS FOR LIFTING AS SHOWN



Do not install near power lines. Power lines, telephone lines, and guy wires look the same. Assume any wire or line can electrocute you.



Do not install on a wet or windy day or when lightning or thunder is in the area. Do not use metal ladder.



Wear shoes with rubber soles and heels. Wear protective clothing including a long-sleeved shirt and rubber gloves.

## Installation Instructions – Fixed Downtilt Mounting Kit for up to 2700mm, (106.3”) Antennas – F-130-GL

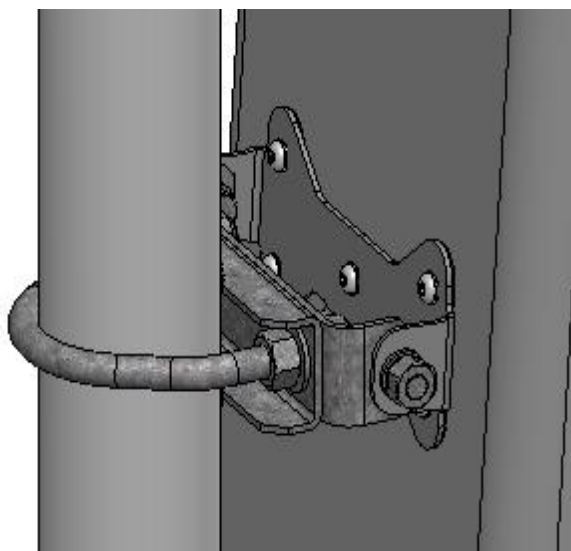
Assemble mounting kit as per Figure 2 & Figure 3 of this document.



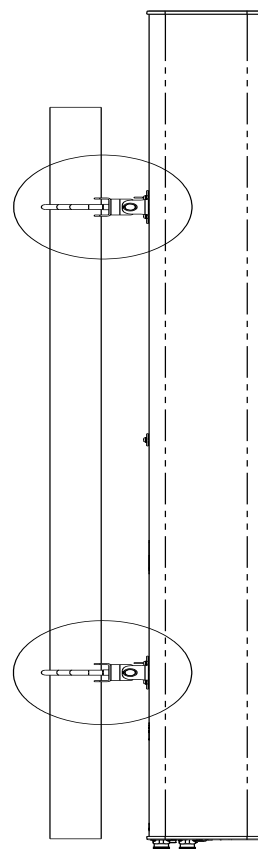
1. Attach the mounting kit assembly to the antenna, before trying to clamp brackets to the pole.



The clamp brackets with u-bolts can clamp pipe diameters between 75(3”)-90mm(3.5”).

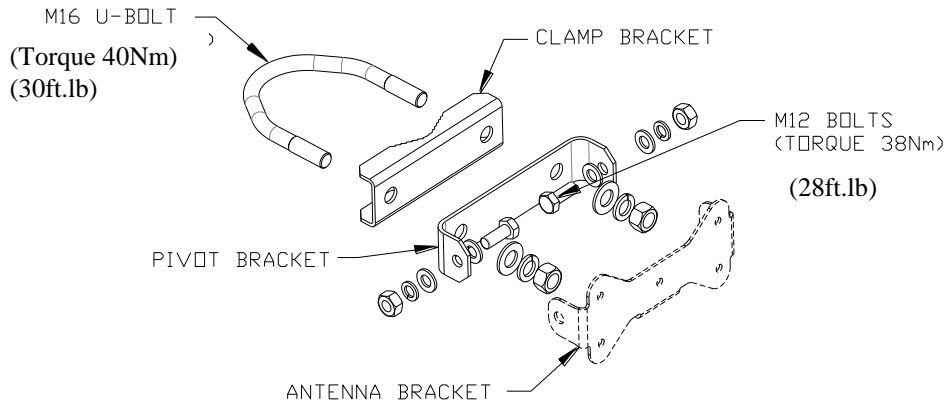


Upper & Lower Mounting Bracket Assembly  
(To Suit Pipes OD 75-90 mm (80 NB))

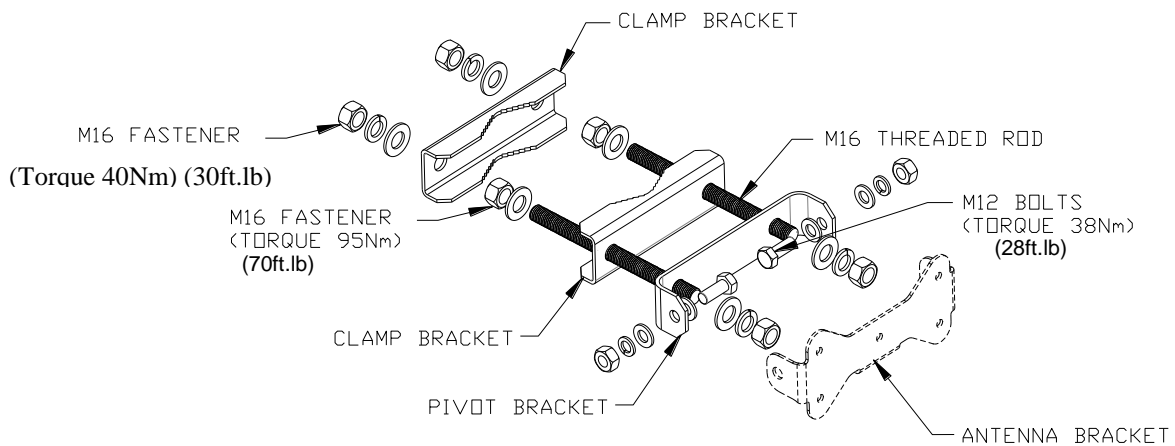


**Figure 1: Correctly Assembled Mounting Kit Using U-bolt for Fixed Downtilt Antenna**

**(Note: Antenna shown is for representation only. Actual antenna may vary)**



**Figure 2: Exploded Assembly of Mounting Bracket with U-Bolts**



**Figure 3: Exploded Assembly of Mounting Bracket using Clamp Bracket**

## Installation Instructions – Adjustable Downtilt Mounting Kit T-128-GL, Bracket Spacing 716mm(28.2")

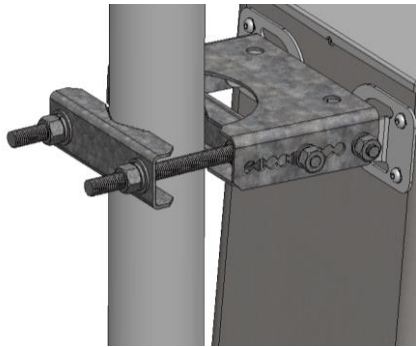
Assemble mounting kit as per Figure 2, Figure 3, Figure 6 & Figure 7 of this document.



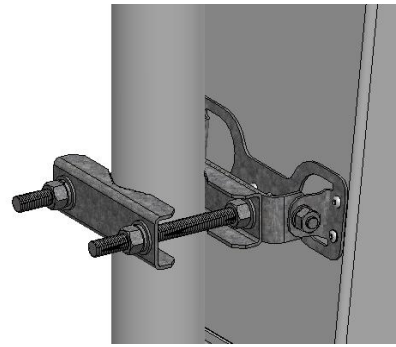
1. Attach the mounting kit assembly to the antenna, before trying to clamp the brackets to the pole.
2. Downtilt angles of 0° & 2° through to 10° in 1° increments can be obtained with the correct adjustment of the tilt arm bracket.
  - 2°- 10° downtilt can be achieved by aligning the corresponding hole in the tilt arm to the pivot bracket which mates against the mounting pole, as shown in Figure 8. The first vacant hole is for 2° downtilt, with each consecutive hole resulting in an increased inclination of 1°.
  - For finer downtilt angle adjustments the distance in between the top and bottom mounting bracket on the pole can be adjusted.
  - For 0° downtilt the tilt arm may be stowed as show in Figure 8.
  - Inclinometer or other angular measuring devices may be used to verify downtilt angle as required.



The clamp brackets in Figure 4 can clamp pipe diameters between 50mm (2") & 115mm (4.5"). For typical installations the minimum recommended pipe diameter is 60mm (2.4").

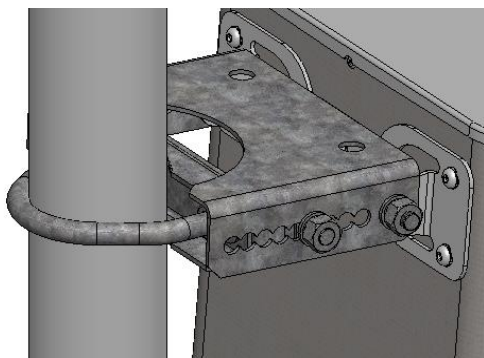


Upper Mounting Bracket Assembly  
To Suit Pipes OD 50mm(2")-115mm(4.5")

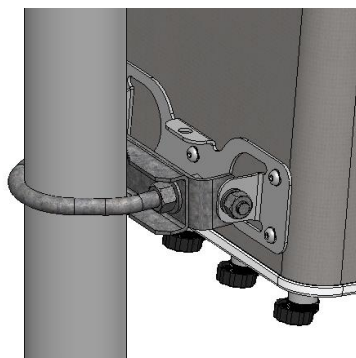


Lower Mounting Bracket Assembly  
To Suit Pipes OD 50mm(2")-115mm(4.5")

**Figure 4: Correctly Assembled Mounting Kit Using Clamp Bracket for Mechanically Adjustable Downtilt Antenna (Note: Antenna shown is for representation only. Actual antenna may vary)**

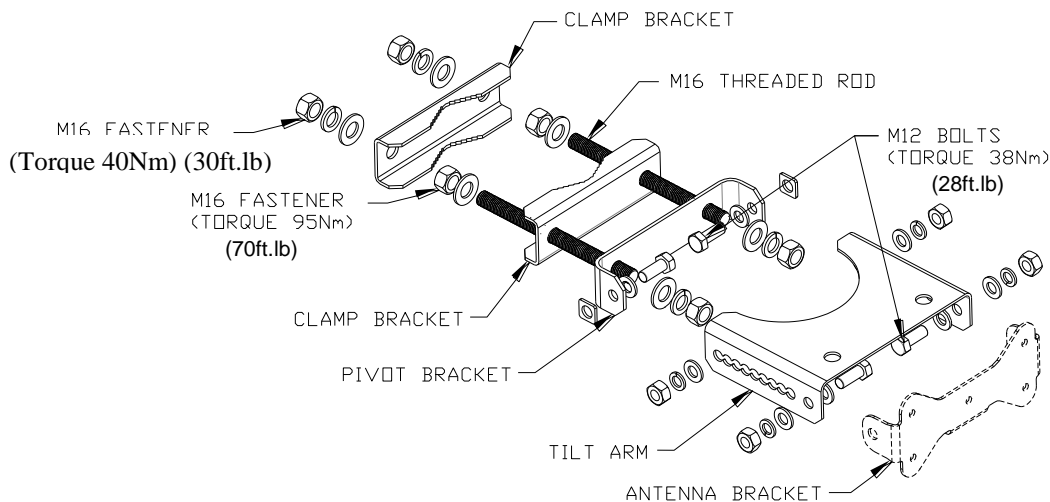


Upper Mounting Bracket Assembly  
To Suit Pipes OD 75(3")-90mm(3.5") (80 NB)

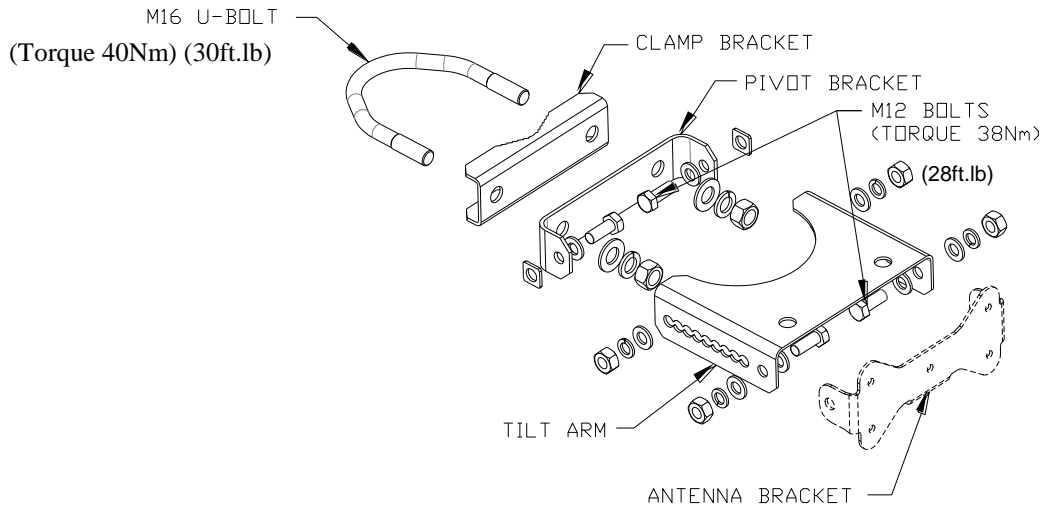


Lower Mounting Bracket Assembly  
To Suit Pipes OD 75(3")-90mm(3.5") (80 NB)

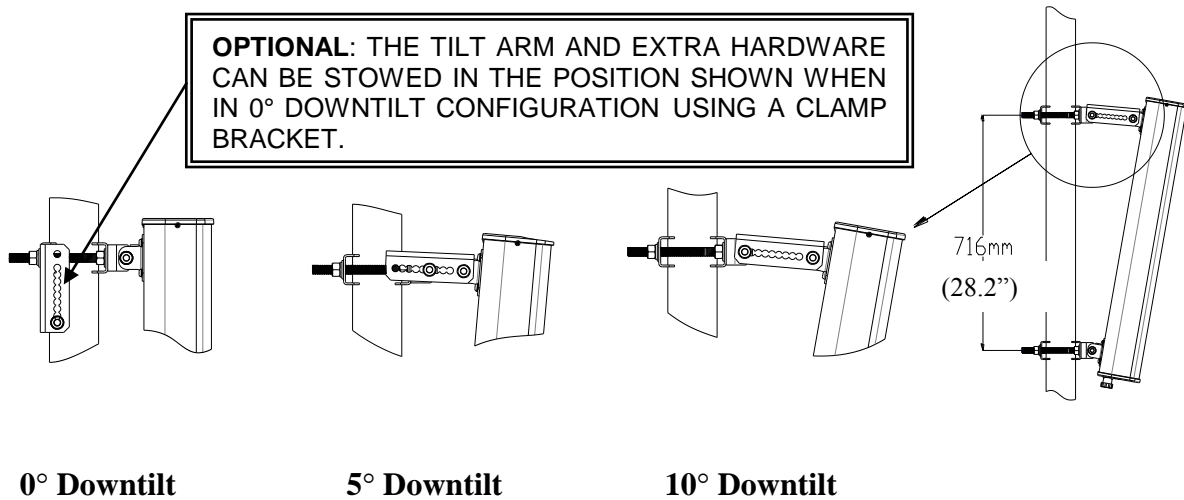
**Figure 5: Correctly Assembled Mounting Kit Using U-bolt for Mechanically Adjustable Downtilt Antenna (Note: Antenna shown is for representation only. Actual antenna may vary)**



**Figure 6: Typical Exploded Assembly for Upper Mounting Bracket using Clamp Bracket**



**Figure 7: Typical Exploded Assembly for Upper Mounting Bracket using U-Bolts**



**Figure 8: Upper Bracket Placement for Various Downtilts**

**Installation Instructions – Adjustable Downtilt Mounting Kit T-126-GL, Bracket Spacing 976mm(38.4”)**

Assemble mounting kit as per Figure 2, Figure 3, Figure 6 & Figure 7 of this document.

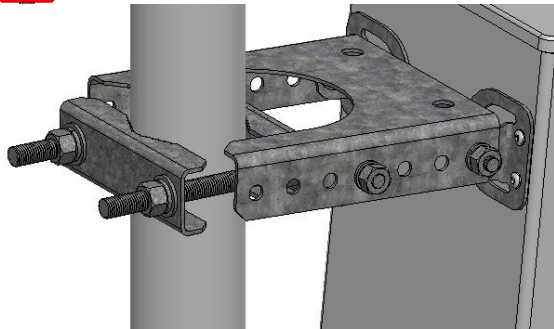


1. Attach the mounting kit assembly to the antenna, before trying to clamp the brackets to the pole.
2. Downtilt angles of 0° through to 12° in 2° increments can be obtained with the correct adjustment of the tilt arm bracket.
  - 2°- 12° downtilt can be achieved by aligning the corresponding hole in the tilt arm to the pivot bracket which mates against the mounting pole, as shown in Figure 11. The first vacant hole is for 2° downtilt, with each consecutive hole resulting in an increased inclination of 1°.
  - For finer downtilt angle adjustments the distance in between the top and bottom mounting bracket on the pole can be adjusted.
  - For 0° downtilt the tilt arm may be stowed as show in Figure 11.
  - Inclinator or other angular measuring devices may be used to verify downtilt angle as required.

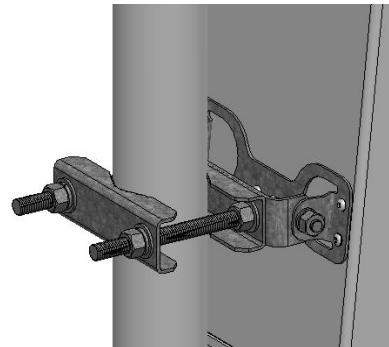




The clamp brackets in Figure 9 can clamp pipe diameters between 50mm (2") & 115mm (4.5"). For typical installations the minimum recommended pipe diameter is 60mm (2.4").

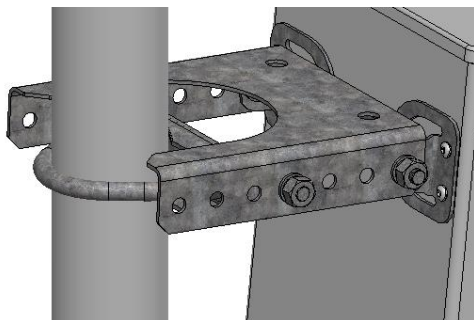


Upper Mounting Bracket Assembly  
To Suit Pipes OD 60mm(2.4")-115mm(4.5")

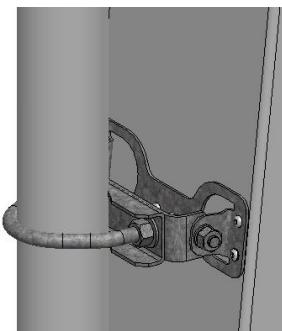


Lower Mounting Bracket Assembly  
To Suit Pipes OD 60mm(2.4")-115mm(4.5")

**Figure 9: Correctly Assembled Mounting Kit Using Clamp Bracket for Mechanically Adjustable Downtilt Antenna (Note: Antenna shown is for representation only. Actual antenna may vary)**



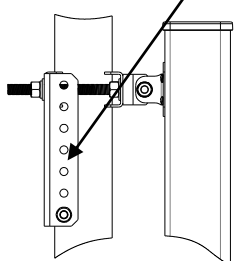
Upper Mounting Bracket Assembly  
To Suit Pipes OD 75(3")-90mm(3.5") (80 NB)



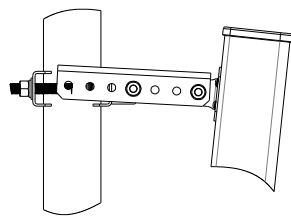
Lower Mounting Bracket Assembly  
To Suit Pipes OD 75(3")-90mm(3.5") (80 NB)

**Figure 10: Correctly Assembled Mounting Kit Using U-bolt for Mechanically Adjustable Downtilt Antenna (Note: Antenna shown is for representation only. Actual antenna may vary)**

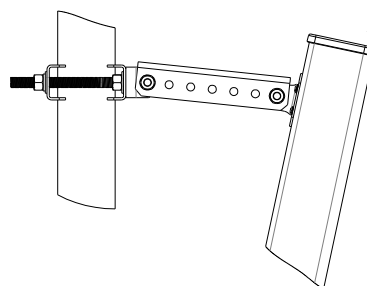
**OPTIONAL:** THE TILT ARM AND EXTRA HARDWARE CAN BE STOWED IN THE POSITION SHOWN WHEN IN 0° DOWNTILT CONFIGURATION USING A CLAMP BRACKET.



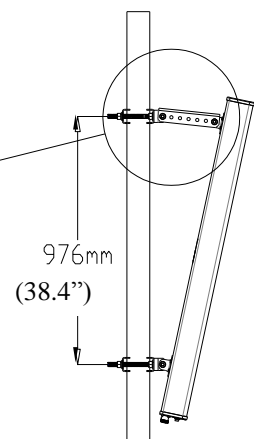
0° Downtilt



6° Downtilt



12° Downtilt



**Figure 11: Upper Bracket Placement for Various Downtilts**

## Installation Instructions – Adjustable Downtilt Mounting Kit T-125-GL, Bracket Spacing 1400mm(55.1")

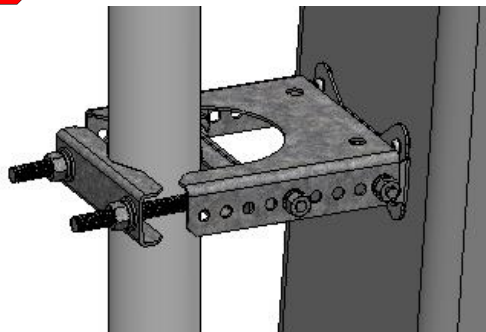
Assemble mounting kit as per Figure 2, Figure 3, Figure 6 & Figure 7 of this document.



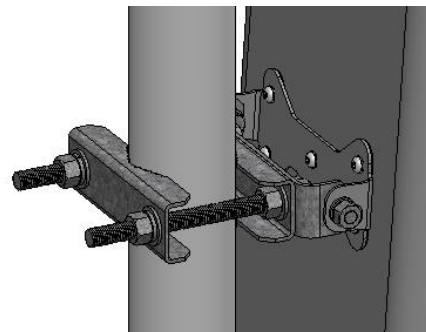
3. Attach the mounting kit assembly to the antenna, before trying to clamp the brackets to the pole.
4. Downtilt angles of 0° through to 8° in 1° increments can be obtained with the correct adjustment of the tilt arm bracket.
  - 1°- 8° downtilt can be achieved by aligning the corresponding hole in the tilt arm to the pivot bracket which mates against the mounting pole, as shown in Figure 14. The first vacant hole is for 1° downtilt, with each consecutive hole resulting in an increased inclination of 1°.
  - For finer downtilt angle adjustments the distance in between the top and bottom mounting bracket on the pole can be adjusted.
  - For 0° downtilt the tilt arm may be stowed as show in Figure 14.
  - Inclinator or other angular measuring devices may be used to verify downtilt angle as required.



The clamp brackets in Figure 9 can clamp pipe diameters between 50mm (2") & 115mm (4.5"). For typical installations the minimum recommended pipe diameter is 75mm (3").

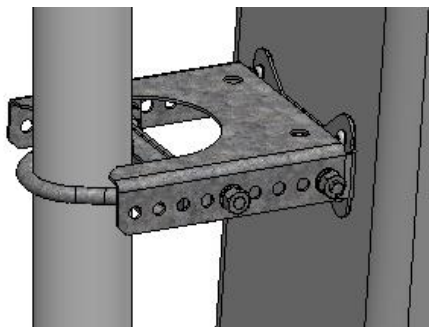


Upper Mounting Bracket Assembly  
To Suit Pipes OD 75mm(3")-115mm(4.5")

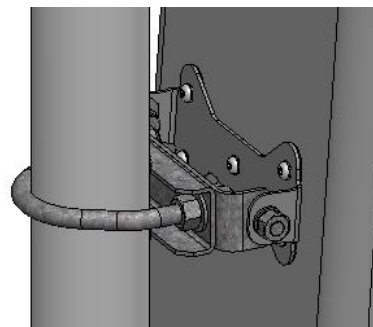


Lower Mounting Bracket Assembly  
To Suit Pipes OD mm(3")-115mm(4.5")

**Figure 12: Correctly Assembled Mounting Kit Using Clamp Bracket for Mechanically Adjustable Downtilt Antenna (Note: Antenna shown is for representation only. Actual antenna may vary)**



Upper Mounting Bracket Assembly  
To Suit Pipes OD 75(3")-90mm(3.5") (80 NB)



Lower Mounting Bracket Assembly  
To Suit Pipes OD 75(3")-90mm(3.5") (80 NB)

**Figure 13: Correctly Assembled Mounting Kit Using U-bolt for Mechanically Adjustable Downtilt Antenna (Note: Antenna shown is for representation only. Actual antenna may vary)**



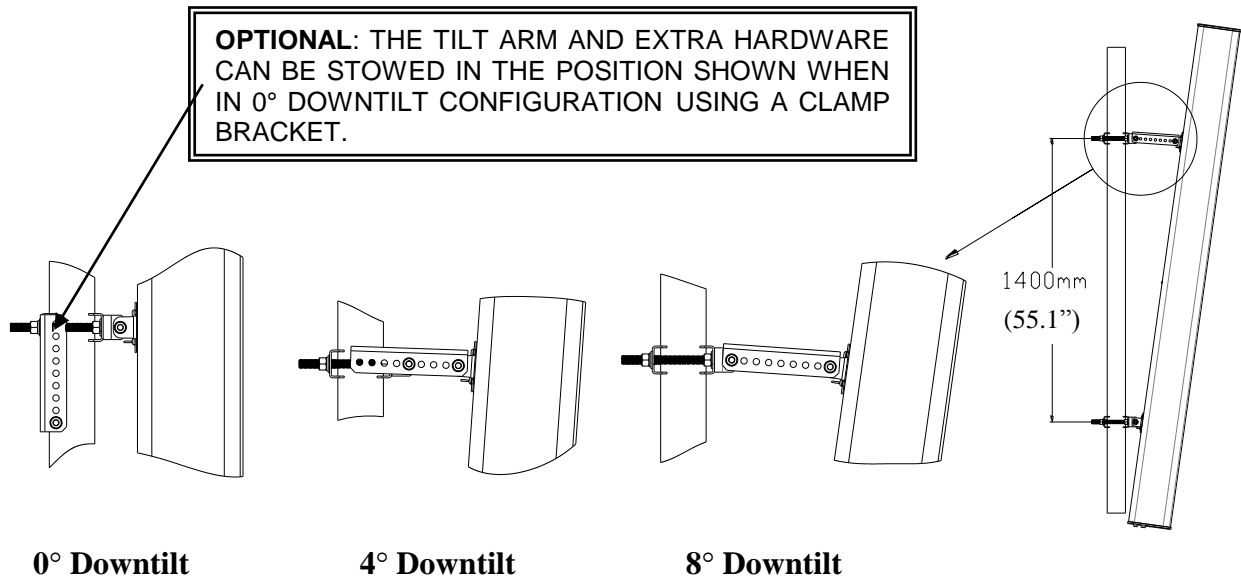


Figure 14: Upper Bracket Placement for Various Downtilts

## Operation of Antennas

### Fixed Downtilt Antennas

The beam downtilt is factory set.

### Manual Electrically Adjustable Downtilt Antennas

The beam downtilt below the horizon is adjusted by rotating the hex socket located at the bottom of the antenna. Turning the hex socket in a clockwise direction increases the beam downtilt below the horizon. Turning the hex socket in an anti-clockwise direction decreases the beam downtilt below the horizon. Beam downtilt setting in degrees below boresight can be read off the scale at the base of the antenna. The downtilt setting is read from the face of the antenna base plate at the point where the scale protrudes.

### AISG Compliant Remotely Adjustable Downtilt Antennas

AISG Compliant antennas are compatible with AISG compliant control unit equipment. For operation of downtilt using AISG compliant controllers see the controller documentation.



**WARNING:** During downtilt adjustment ensure the hex socket is not turned past the minimum and maximum positions as shown on the downtilt indicator scale. Forcing the hex adjustment beyond this point may lead to damage of the downtilt mechanism. **Using power drills and electric screwdrivers to adjust downtilt may also lead to damage of the downtilt mechanism.**

## Port and Band Identification

Each RF and/or AISG port on the antenna is numbered and identified in accordance with AISG Standard "AISG Antenna Port Color Coding."

## Remote Electrical Tilt Connection

The AISG connector fitted to the antenna is designed to accept any AISG compliant cable assembly. After ensuring both connectors are dry, push in the mating connector, then tighten.



Using excessive torque may damage the AISG connection in the antenna.

## RF Cable Connection

The RF female connectors fitted to the antenna are designed to fit jumper cables with corresponding male connector. After ensuring both mating connectors are dry push the male connector in and tighten to the correct torque setting.

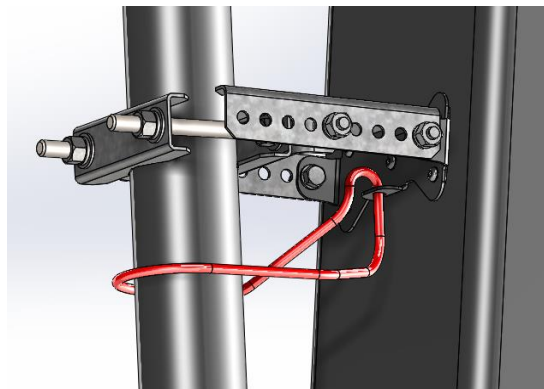
## ADJUSTING MECHANICAL DOWN TILT AFTER INSTALLATION T-125-GL, T-126-GL, T-128-GL & F-130-GL



1. Use a tether to secure the antenna's hoisting eye to the mounting structure. The tether can be a rope, wire rope, chain, or similar material. The tether should be short enough to prevent the antenna from tilting beyond its maximum downtilt range. This will prevent the antenna from tilting away from the mounting structure when the adjusting bolts are removed.

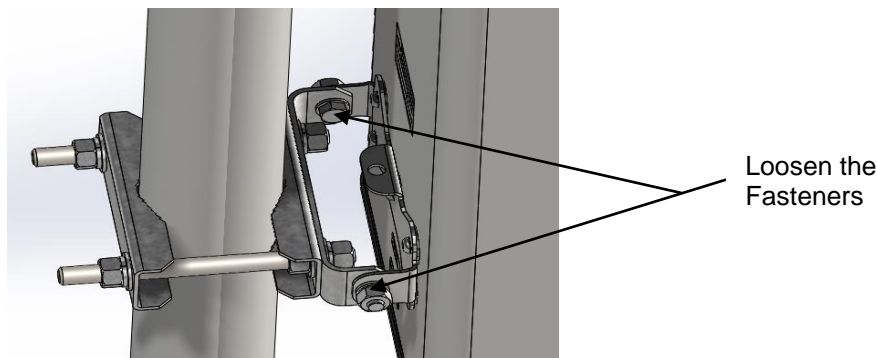


Installed cables or the antenna may be damaged if they are allowed to strike the mounting structure when the antenna mechanical downtilt is changed.



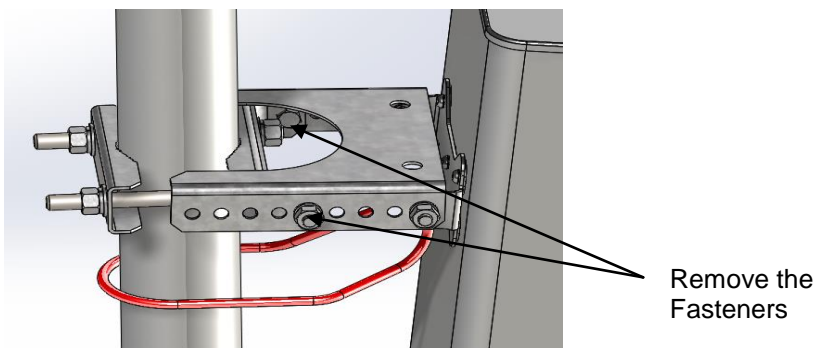
**Figure 17: Upper Mounting Bracket Assembly**

2. Loosen the fasteners holding the bottom antenna bracket to the bottom pivot bracket. Do not remove them.



**Figure 18: Lower Mounting Bracket Assembly**

3. Remove the M12 bolts, washers, and nuts from the pivot bracket. The antenna may tilt down to the extent allowed by the tether installed in step 1.



**Figure 19: Upper Mounting Bracket Assembly**

4. The desired downtilt angle may be obtained with the correct adjustment of the tilt arm bracket. See the installation instructions above for detailed information.
5. Adjust the antenna downtilt to the desired angle and reinstall the M12 bolts, washers, and nuts between the upper pivot bracket and the tilt arm.
6. Tighten all four M12 nuts to 38Nm (28 ft.lb).
7. Remove the tether.