

## 3.4. Recommended Installation Tools

### Introduction

This section describes all the recommended tools for installation of **WiBAS™ OSDR-HUB** and **WiBAS™ G5 micro-BS / evo-BS**.

### Prerequisites

It is installer responsibility to provide the tools for equipment installation.

### Equipment installation tools

| Item | Tool / Photo                                                                        | Description                                                                                                                                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    |    | Adjustable torque U-wrench tool (up to 29 mm opening and supporting max tightening torque 40 Nm).<br><br>Used for tightening screws and nuts.                                                                                                                                                                                    |
| 2    |   | Adjustable torque wrench tool with bits (supporting max tightening torque 20 Nm).<br><br>Used for tightening screws and nuts.                                                                                                                                                                                                    |
| 3    |  | Set of allen keys.<br>Used for:<br><ul style="list-style-type: none"><li>• WiBAS™ OSDR-HUB radio unit wave guide polarizer (1.5 mm) and cable holder installation (2.5 mm).</li><li>• WiBAS™ G5 micro-BS / evo-BS screws (2.5 mm) de-installation for installing omnidirectional antenna (<a href="#">HANT28360V</a>).</li></ul> |
| 4    |  | Digital inclinometer with magnetic base.<br><br>Used for antennas sectoral 90° alignment works.                                                                                                                                                                                                                                  |
| 5    |  | 13 mm and 8 mm wrench.<br><br>Used for antennas sectoral 90° alignment works (13 mm) and <a href="#">OSDR-360-ANT-MNT-KIT</a> (8 mm).                                                                                                                                                                                            |
| 6    |  | Cross head and Flat head slotted tip screwdrivers (PH2 / PH3).<br><br>Used for general works.                                                                                                                                                                                                                                    |

*Continued on next page*

## Recommended Installation Tools, Continued

### Termination of cables

#### Type of cables to be terminated:

- Ethernet (S-FTP) ([ETH-CAB-SFTP](#)).
- Power supply cable ([AC-PWR-CAB](#), [DC-PWR-CAB-1 / 2 / 3](#)).
- Grounding ([GND-CAB6-ID](#), [GND-KIT16-OD](#)).

| Item | Tool / Photo                                                                        | Description                                                                 |
|------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1    |    | Blade.                                                                      |
| 2    |    | Cable cutter.                                                               |
| 3    |    | Pliers (long nose).                                                         |
| 4    |    | <a href="#">CRIMP-TOOL-S</a>                                                |
| 5    |    | Ethernet cable tester.                                                      |
| 6    |   | Crimping tool for 6 mm <sup>2</sup> and 16 mm <sup>2</sup> grounding cable. |
| 7    |  | Hot air gun.                                                                |
| 8    |  | Soldering iron.                                                             |
| 9    |  | Solder.                                                                     |

### Specific works

| Item | Tool / Photo                                                                        | Description                                                                                                                                         |
|------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    |  | Drill machine with 5 mm bit.<br>Used for wall installation of power injectors.                                                                      |
| 2    |  | <a href="#">TOOL-M20</a><br>Used for cable gland installation of power injectors ( <a href="#">PONE-OD67-AC</a> - <a href="#">POE-HP-OD67-DC</a> ). |

## 4. Installation Procedures

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**Scope**

This chapter describes in topics the main installation procedures of the following wireless equipment:

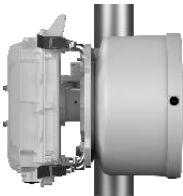
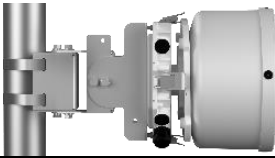
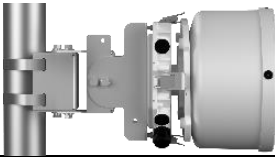
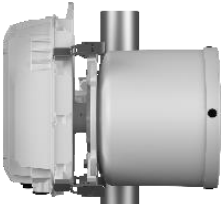
- **WiBAS™ OSDR-HUB**
- **WiBAS™ G5 micro-BS**
- **WiBAS™ G5 evo-BS**
- **WiBAS™ G5 dual-BS**

| # | Description                                         | Page                |
|---|-----------------------------------------------------|---------------------|
| 1 | <a href="#">Installing Radio Units and Antennas</a> | <a href="#">81</a>  |
| 2 | <a href="#">Installing External GNSS Module</a>     | <a href="#">165</a> |
| 3 | <a href="#">Installing Radio Units Cables</a>       | <a href="#">176</a> |

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## 4.1. Installing Radio Units and Antennas

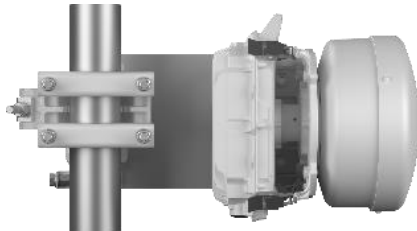
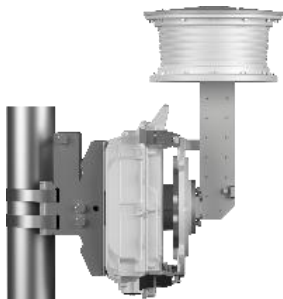
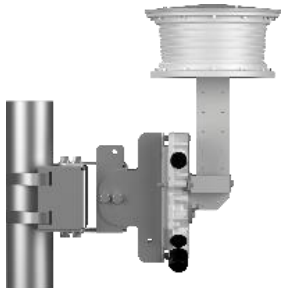
**Introduction** This section describes the installation procedures for radio unit and antenna, as follows:

| Photo                                                                                                                     | Installation Procedure Description                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>WiBAS™ OSDR-HUB</b><br>               | <a href="#">WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna</a> (page <a href="#">83</a> )                                           |
| <b>WiBAS™ OSDR-HUB</b><br>               |                                                                                                                                        |
| <b>WiBAS™ G5 micro-BS / evo-BS</b><br> | <a href="#">WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna</a> (page <a href="#">97</a> )                               |
| <b>WiBAS™ G5 micro-BS / evo-BS</b><br> | <a href="#">WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit</a> (page <a href="#">105</a> ) |
| <b>WiBAS™ G5 micro-BS / evo-BS</b><br> | <a href="#">WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit</a> (page <a href="#">117</a> )     |
| <b>WiBAS™ G5 dual-BS</b><br>           | <a href="#">WiBAS G5 dual-BS and Dual-Polarization Sectoral 90 Integrated Antenna</a> (page <a href="#">129</a> )                      |

*Continued on next page*

## Installing Radio Units and Antennas, Continued

Introduction,  
continued

| Photo                                                                                                                     | Installation Procedure Description                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>WiBAS™ OSDR-HUB</b><br>               | <a href="#">WiBAS OSDR-HUB and Sectoral 180 Integrated Antenna</a> (page <a href="#">133</a> )                                      |
| <b>WiBAS™ OSDR-HUB</b><br>              | <a href="#">WiBAS OSDR-HUB and Omnidirectional 360 Antenna with OSDR-360-ANT-MNT-KIT Mounting Kit</a> (page <a href="#">139</a> )   |
| <b>WiBAS™ G5 micro-BS / evo-BS</b><br> | <a href="#">WiBAS G5 micro-BS / evo-BS and Omnidirectional 360 Antenna with MTK-DMA-BX Mounting Kit</a> (page <a href="#">148</a> ) |
| <b>WiBAS™ G5 evo-BS</b><br>            | <a href="#">WiBAS G5 evo-BS and Parabolic Integrated Antenna, 0.6 m</a> (page <a href="#">157</a> )                                 |

## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna

### Introduction

This paragraph describes the installation procedures that needs to be followed when combining the Base Station radios and sectoral antennas that are listed below:

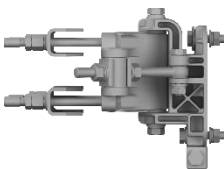
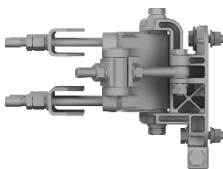
|                     |                 | Radio Units Frequency (GHz) – Form Factor |      |      |    |
|---------------------|-----------------|-------------------------------------------|------|------|----|
|                     |                 | WiBAS™ OSDR-HUB                           |      |      |    |
|                     |                 | 10.5                                      | 26   | 28   | 32 |
| Antenna Order Codes | BRA-1090H-I     | √(1)                                      | -    | -    | -  |
|                     | BRA-1090V-I     | √(1)                                      | -    | -    | -  |
|                     | HANT2690H-MB    | -                                         | √(1) | -    | -  |
|                     | HANT2690V-MB    | -                                         | √(1) | -    | -  |
|                     | HANT2690H-HG-MB | -                                         | √(1) | -    | -  |
|                     | HANT2690V-HG-MB | -                                         | √(1) | -    | -  |
|                     | HANT2890H-MB    | -                                         | -    | √(1) | -  |
|                     | HANT2890V-MB    | -                                         | -    | √(1) | -  |
|                     | HANT2890H-HG-MB | -                                         | -    | √(1) | -  |
|                     | HANT2890V-HG-MB | -                                         | -    | √(1) | -  |
|                     | HANT2628360V    | -                                         | -    | -    | -  |
|                     | HANT3290H       | -                                         | -    | -    | -  |
|                     | HANT3290V       | -                                         | -    | -    | -  |

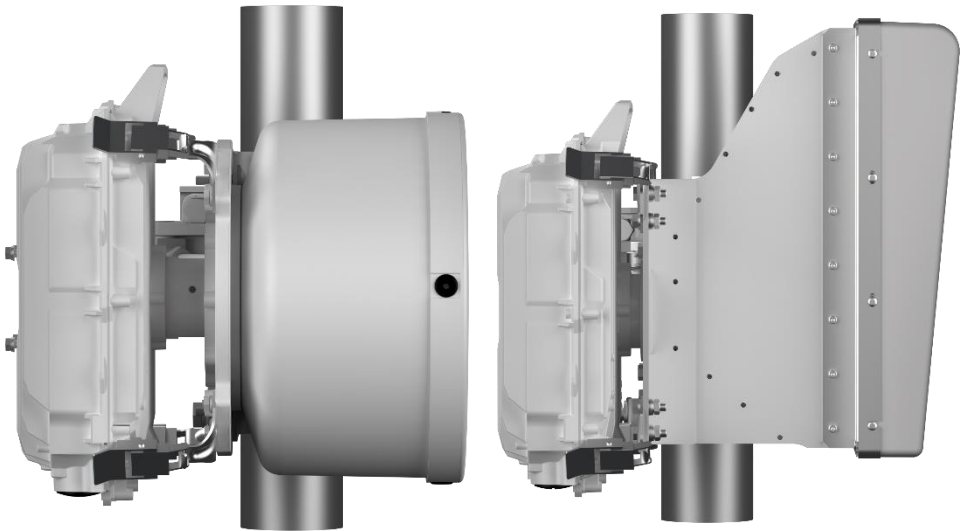
Continued on next page

<sup>(1)</sup> Mounting kit from antenna package.

# WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

**Overview**      The following materials table for installation contains indicative order codes:

| OSDR-26-H-1008-01                                                                  |                                                                                    | OSDR-10-H-350                                                                       |                                                                                      |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |                                                                                    |                                                                                     |                                                                                      |
| HANT2690V-MB                                                                       |                                                                                    | BRA-1090V-I                                                                         |                                                                                      |
|  |  |  |  |



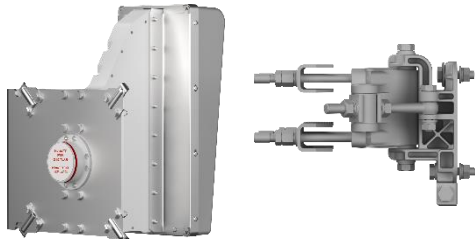
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## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

### Radio unit packing materials

| OSDR-26-H-1008-01 or<br>OSDR-10-H-350                                             | Details                                                         |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Radio unit.</li> </ul> |

### Antenna packing materials

| HANT2690V-MB                                                                        | Details                                                                                                                                                |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <ul style="list-style-type: none"> <li>• Antenna.</li> <li>• Pole mounting kit.</li> <li>• Greasing paste.</li> <li>• Installation leaflet.</li> </ul> |
| BRA-1090V-I                                                                         | Details                                                                                                                                                |
|  | <ul style="list-style-type: none"> <li>• Antenna.</li> <li>• Pole mounting kit.</li> <li>• Greasing paste.</li> <li>• Installation leaflet.</li> </ul> |

### Tool Kit packing materials

| SEC-ANT-XPOL-KIT                                                                    | Details                                                                                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Universal antenna alignment tool.</li> <li>• 4mm ball-ended hexagon socket screw key.</li> </ul> |

Continued on next page

## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

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**Prerequisites**

Assembly the antenna as per the installation manual inside the box.

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**Precautions**

This procedure includes antenna adjustment verticality with respect to the ground.

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**Installation  
tools**

Adjustable torque u-wrench, allen key, digital inclinometer, wrench (13 mm) and screw drivers.

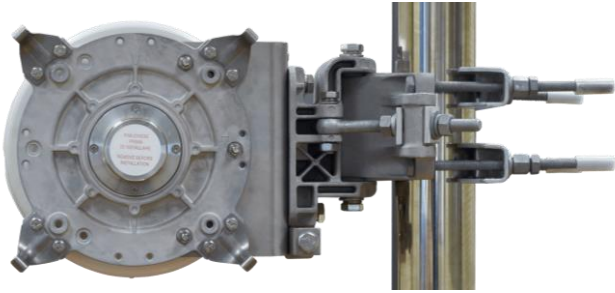
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## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

### Procedure

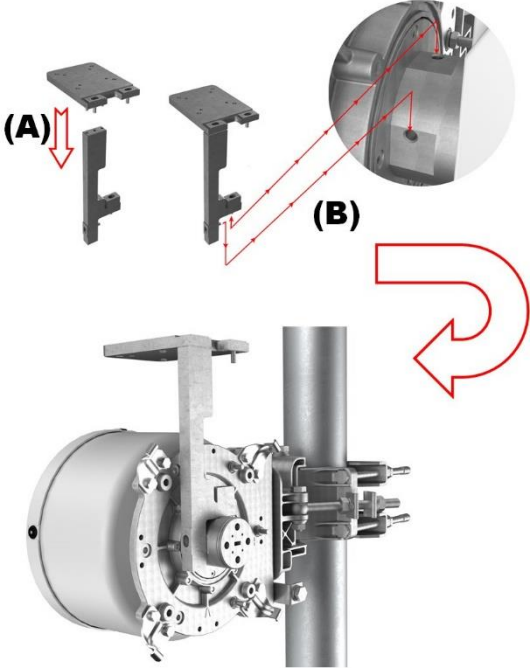
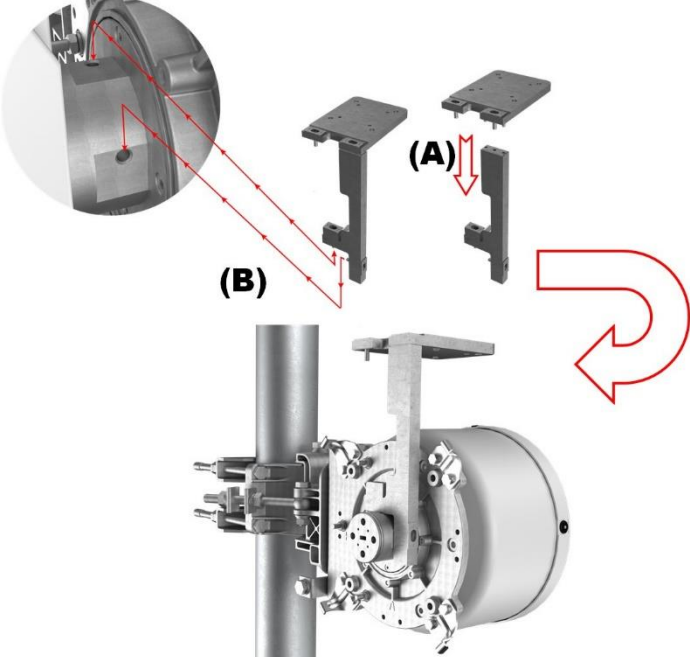
How to install the antenna of 26 or 28 GHz, proceed as follows:

| Step | Action                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Follow the included instructions to assemble the antenna mount and attach it to the antenna.</p> <p>The antenna installation should be as shown below.</p>                  |
|      | <p> <b>Note</b> The antenna is capable to be installed in both side of the pole The photo is indicative of the installation in the right orientation of the antenna model.</p> |

*Continued on next page*

## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

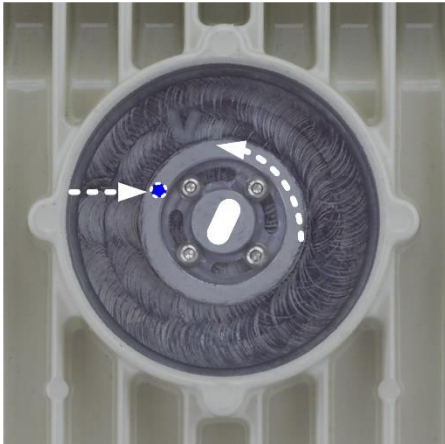
**Procedure,**  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p data-bbox="564 427 1390 495">Use the allen key (included in package) to install the tool as shown below.</p> <div data-bbox="564 506 1390 1240"> <p data-bbox="823 517 1134 546"><b>Antenna OFFSET RIGHT</b></p>  </div> <div data-bbox="564 1240 1390 1962"> <p data-bbox="823 1252 1126 1281"><b>Antenna OFFSET LEFT</b></p>  </div> |

*Continued on next page*

## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

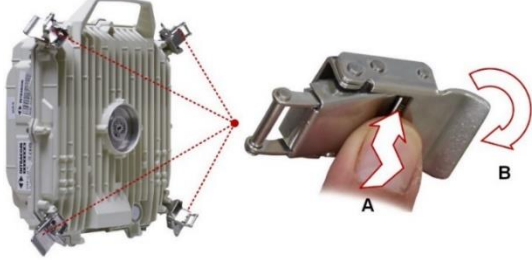
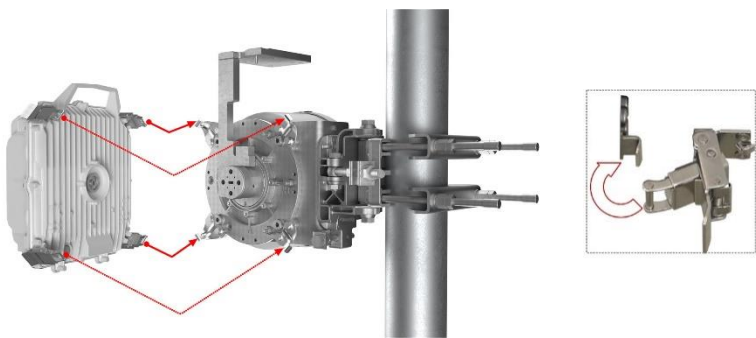
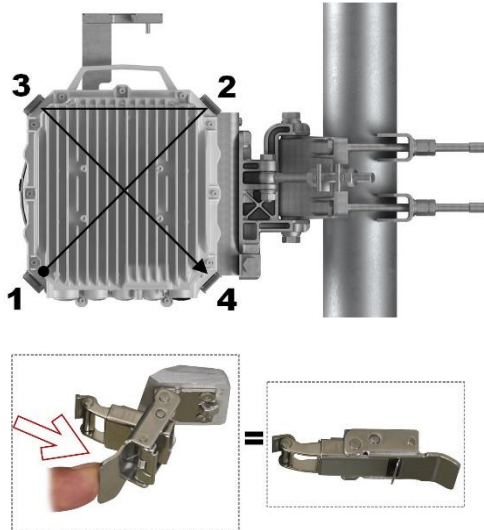
**Procedure,**  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>Perform radio antenna polarization adjustment, as follows:</p> <ul style="list-style-type: none"> <li>For <b>vertical polarization</b> place antenna (<a href="#">HANT2690V-MB</a>) and radio unit, as shown below: <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Radio unit wave guide</p>  </div> <div style="text-align: center;"> <p>Antenna feeder</p>  </div> </div> </li> <li>For <b>horizontal polarization</b> perform the following actions: <ul style="list-style-type: none"> <li>Use the allen key to loosen the four screws at the waveguide port of the radio unit (do not remove the screws) and then <b>TURN</b> the polarizer, as shown below.</li> <li>Place antenna (<a href="#">HANT2690H-MB</a>), as shown below.</li> </ul> </li> </ul> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <div style="margin-top: 20px;">  <p>Do not over tighten the screws. Apply maximum tightening torque <b>0.6 Nm</b>.</p> <p> <b>Note</b> The misalignment of slots between the movable part and the stationary part of the radio waveguide port is intentional and does not indicate a problem.</p> </div> |

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## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

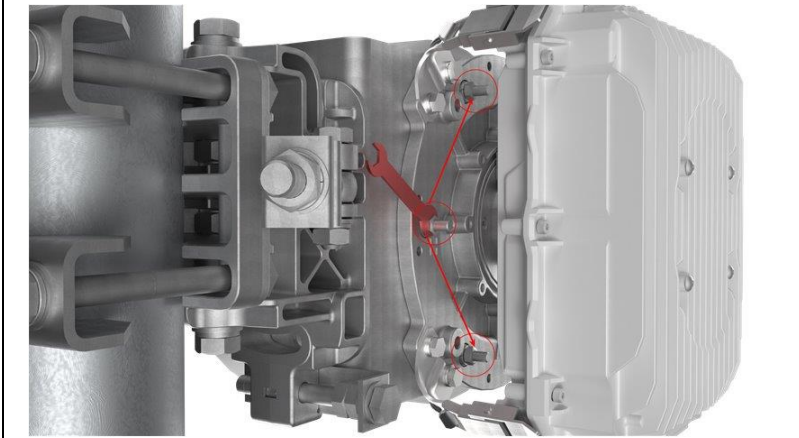
### Procedure, continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <p>Perform radio unit installation onto the antenna, as follows:</p> <ul style="list-style-type: none"> <li>• Lubricate the antenna O-ring with silicone grease.</li> <li>• Unlock the four latches of the radio unit, as shown below.</li> </ul>  <ul style="list-style-type: none"> <li>• Open the latches to mount the radio into the antenna hooks, as shown below:</li> </ul>  <ul style="list-style-type: none"> <li>• Lock and secure all four latches according to the pattern below:</li> </ul>  |

*Continued on next page*

## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

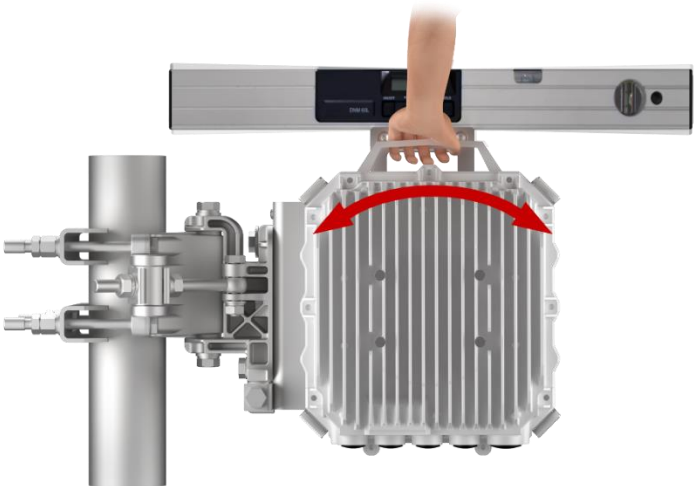
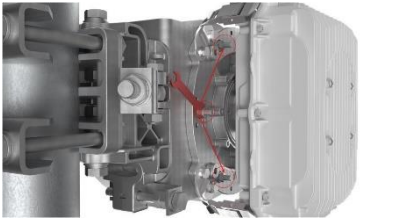
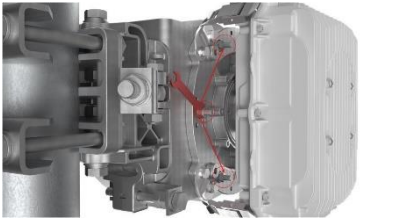
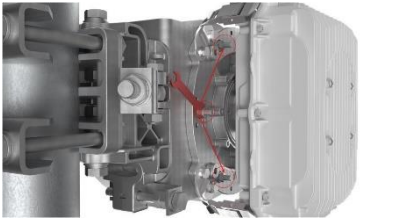
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>Use the wrench key (13 mm) to loosen the 3 nuts, as shown below:</p> <p> <b>Do not remove the nuts.</b></p> <p><b>Antenna OFFSET RIGHT</b></p>  <p><b>Antenna OFFSET LEFT</b></p>  |

*Continued on next page*

# WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

Procedure,  
continued

| Step                                                                                | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |             |                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 6                                                                                   | <p>Perform the following actions:</p> <ul style="list-style-type: none"><li>• Place the inclinometer.</li><li>• Easy rotate (left-right) the radio unit till the inclinometer digital indicator reaches <b>0 degrees</b>.</li></ul>                                                                                                                                                                                                                                                                 |              |             |                                                                                     |                                                                                      |
| 7                                                                                   | <p>Use the wrench key (13 mm) to fully tighten the 3 nuts, as shown below:</p> <table><tr><th>OFFSET RIGHT</th><th>OFFSET LEFT</th></tr><tr><td></td><td></td></tr></table> <p> <b>Do not over tighten.</b> Use the adjustable u-wrench to apply the final tightening torque (follow the included antenna instructions).</p> | OFFSET RIGHT | OFFSET LEFT |  |  |
| OFFSET RIGHT                                                                        | OFFSET LEFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |             |                                                                                     |                                                                                      |
|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |             |                                                                                     |                                                                                      |

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## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

Procedure,  
continued

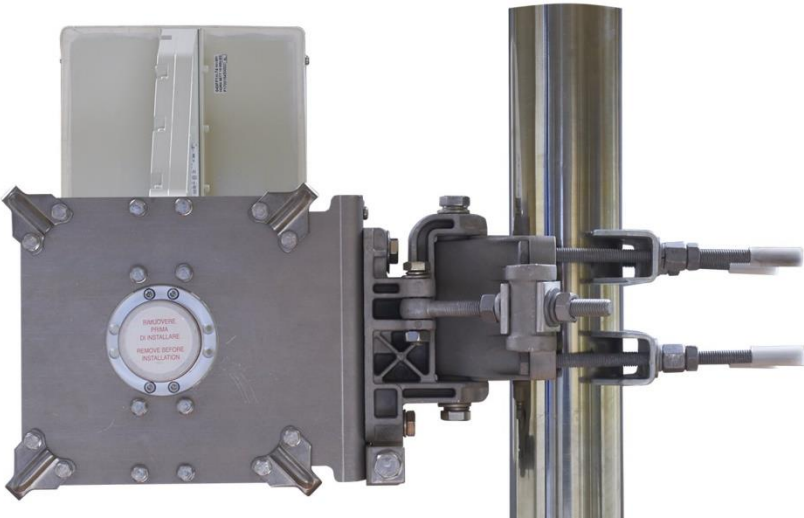
| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | <p>Use the u-wrench tool to perform <b>azimuth adjustment</b>, as described to the antenna included instructions.</p> <p>Use the u-wrench tool to perform <b>elevation adjustment</b>, as described to the antenna included instructions.</p> <p>Use the allen key (included in package) to remove the tool.</p> <p> <b>Do not over tighten.</b> Use the adjustable u-wrench to apply the final tightening torque (follow the included antenna instructions).</p> |

End of procedure.

*Continued on next page*

# WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

**Procedure**      How to install the antenna of 10.5 GHz, proceed as follows:

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Follow the included instructions to assemble the antenna mount and attach it to the antenna.</p> <p>The antenna installation should be as shown below.</p> <div data-bbox="576 647 1383 1162"></div> <div data-bbox="584 1211 683 1263"></div> <p>The antenna is capable to be installed in both side of the pole The photo is indicative of the installation in the right orientation of the antenna model.</p> |

Continued on next page

## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

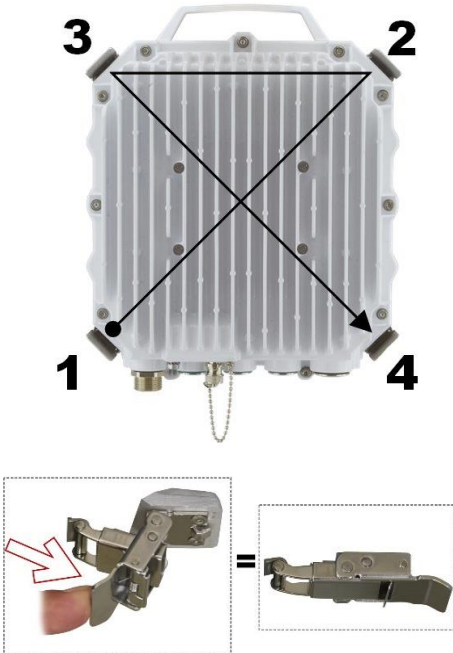
**Procedure,**  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>Perform radio antenna polarization adjustment, as follows:</p> <ul style="list-style-type: none"> <li>For <b>vertical polarization</b> place antenna (<b>BRA-1090V-I</b>) and radio unit, as shown below:</li> </ul> <p><b>Radio unit wave guide      Antenna feeder</b></p>  <ul style="list-style-type: none"> <li>For <b>horizontal polarization</b> perform the following actions: <ul style="list-style-type: none"> <li>Use the allen key to loosen the four screws at the waveguide port of the radio unit (do not remove the screws) and then <b>TURN</b> the polarizer, as shown below.</li> <li>Place antenna (<b>BRA-1090H-I</b>), as shown below.</li> </ul> </li> </ul>  <p> Do not over tighten the screws. Apply maximum tightening torque <b>0.6 Nm</b>.</p> <p> <b>Note</b> The misalignment of slots between the movable part and the stationary part of the radio waveguide port is intentional and does not indicate a problem.</p> |

*Continued on next page*

## WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna, Continued

### Procedure, continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <p>Perform radio unit installation onto the antenna, as follows:</p> <ul style="list-style-type: none"> <li>• Lubricate the antenna O-ring with silicone grease.</li> <li>• Unlock and open the radio unit latches and mount it to the antenna hooks.</li> <li>• Lock and secure all four latches according to the pattern below:</li> </ul>  |

End of procedure.

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna

### Introduction

This paragraph describes the installation procedures that needs to be followed when combining the Base Station radios and sectoral antennas that are listed below:

|                     |                 | Radio Units Frequency (GHz) – Form Factor |                    |
|---------------------|-----------------|-------------------------------------------|--------------------|
|                     |                 | WiBAS™ G5                                 |                    |
|                     |                 | micro-BS 28                               | evo-BS 24.25-29.50 |
| Antenna Order Codes | HANT2690H-MB    | -                                         | √(1)               |
|                     | HANT2690V-MB    |                                           | √(1)               |
|                     | HANT2690H-HG-MB |                                           | √(1)               |
|                     | HANT2690V-HG-MB |                                           | √(1)               |
|                     | HANT2890H-MB    | √(1)                                      | √(1)               |
|                     | HANT2890V-MB    | √(1)                                      | √(1)               |
|                     | HANT2890H-HG-MB | √(1)                                      | √(1)               |
|                     | HANT2890V-HG-MB | √(1)                                      | √(1)               |



WiBAS™ G5 evo-BS requires external GNSS module kit installation. Please refer to [Installing External GNSS Module](#).

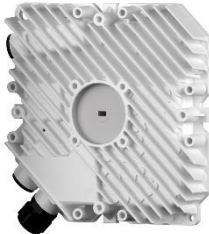
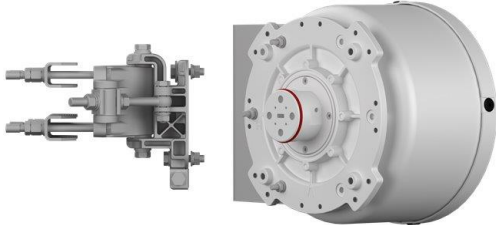
*Continued on next page*

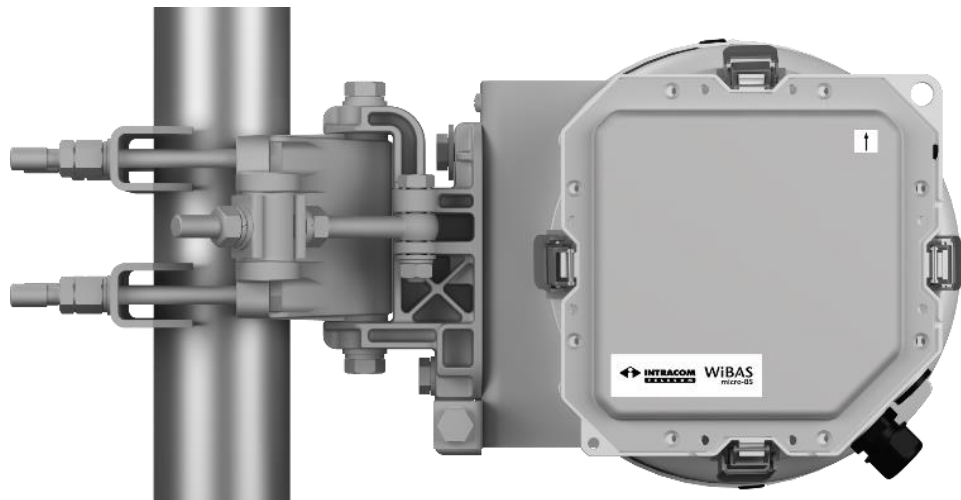
<sup>(1)</sup> Mounting kit from antenna package.

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna, Continued

### Overview

The following materials table for installation contains indicative order codes:

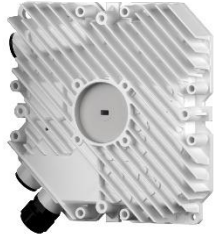
| WMBS-28-L-1008-01 or WG5-EVO-BS-27-29                                               |  |
|-------------------------------------------------------------------------------------|--|
|   |  |
| HANT2890V-MB                                                                        |  |
|  |  |



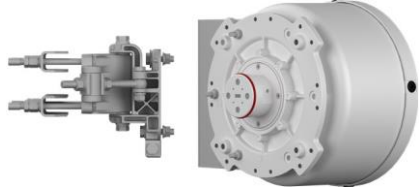
*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna, Continued

### Radio unit packing materials

| WMBS-28-L-1008-01 or WG5-EVO-BS-27-29                                             | Packing Materials                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Radio unit.</li> <li>• Materials for installing radio unit to <b>HANT2890V</b> antenna: <ul style="list-style-type: none"> <li>– Set of latches (x4)</li> <li>– M6 x 12 mm screws (x8)</li> <li>– M6 lock washers (x8)</li> </ul> </li> </ul> <p><b>Note</b> • The following materials are not used. Used for installing radio unit to <b>MTK-DMA-BX</b> mounting kit:</p> <ul style="list-style-type: none"> <li>– M5 x 50 mm screws (x4)</li> <li>– M5 washers (x4)</li> <li>– M5 nuts (x4)</li> <li>– Spacers 12 mm (x4) - aluminum</li> </ul> |

### Antenna packing materials

| HANT2890V-MB                                                                        | Details                                                                                                                                                |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Antenna.</li> <li>• Pole mounting kit.</li> <li>• Greasing paste.</li> <li>• Installation leaflet.</li> </ul> |

### Tool Kit packing materials

| SEC-ANT-XPOL-KIT                                                                    | Details                                                                                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Universal antenna alignment tool.</li> <li>• 4mm ball-ended hexagon socket screw key.</li> </ul> |

Continued on next page

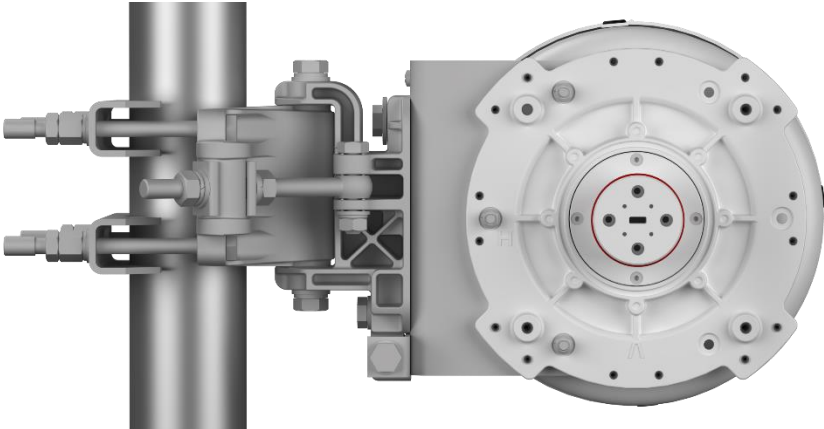
# WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna, Continued

|                                                                                   |                                                                     |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Installation tools                                                                | Adjustable torque U-wrench, wrench (13 mm) and screw driver.        |
| Prerequisite                                                                      | Assembly the antenna as per the installation manual inside the box. |
|  | <b>DO NOT INSTALL THE HOOKS.</b>                                    |

Procedure

**Prerequisite**  **Take into account the steps 2, 5, 6, 7 and 8 as described in procedure of [WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna](#) on page [83](#).**

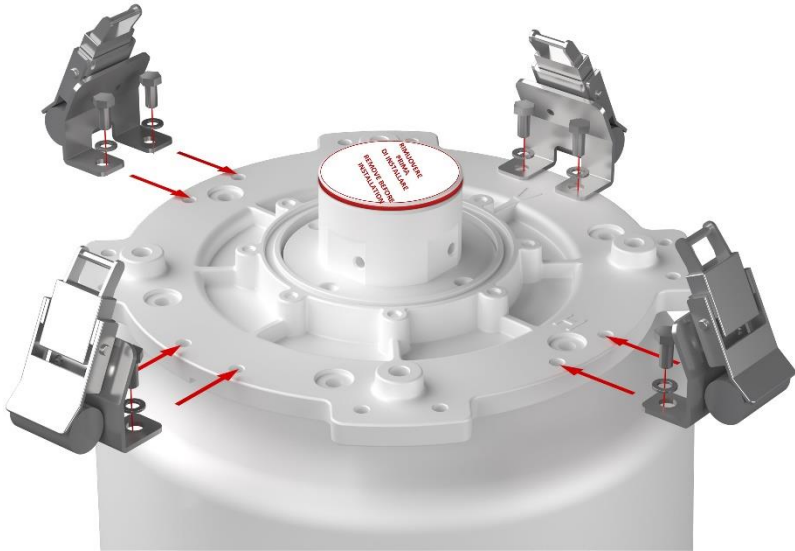
How to install the WiBAS™ G5 micro-BS / evo-BS to [HANT2890V-MB](#) antenna, proceed as follows:

| Step | Action                                                                                                                                                                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Assembly the antenna as per the installation manual inside the box. The following picture is an assembly preview</p> <p> <b>DO NOT INSTALL THE HOOKS WHICH INCLUDED IN THE ANTENNA PACKAGE.</b></p>  |

Continued on next page

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna, Continued

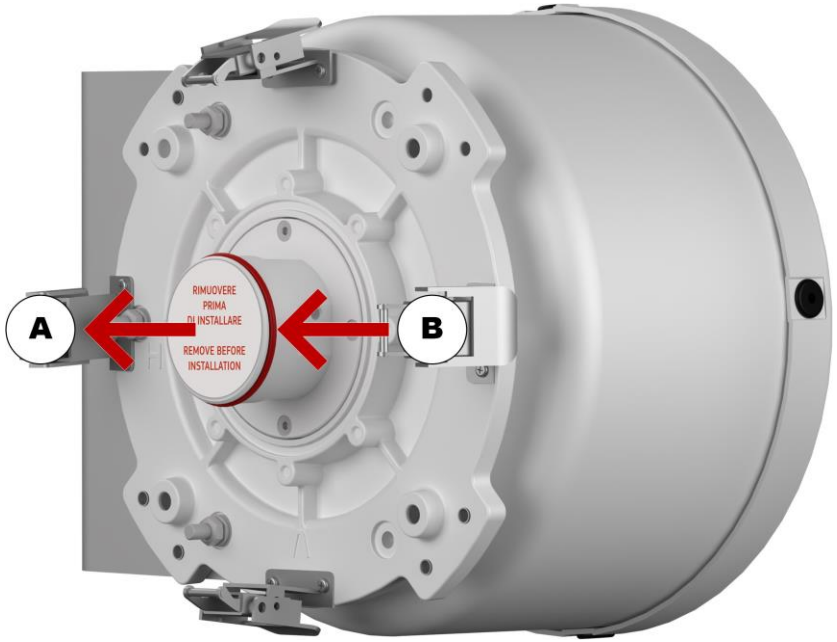
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p>Use the u-wrench to install the antenna latches, as shown below:</p> <p><b>Note</b></p> <ul style="list-style-type: none"><li>From order code <b>WMBS-OB-U-DSDS-SB</b> or <b>WG5-EVO-BS-LB-UB</b> use the following materials:<ul style="list-style-type: none"><li>– Set of latches (x4)</li><li>– M6 x 12 mm screws (x8)</li><li>– M6 lock washers (x8)</li></ul></li></ul>  <p><b>!</b> Do not over tighten. Adjust the tool for applying maximum tightening torque <b>2.0 Nm</b>.</p> |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna, Continued

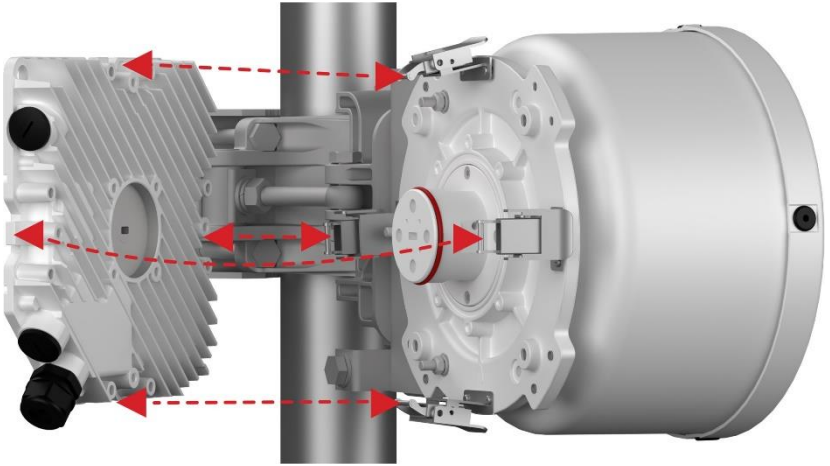
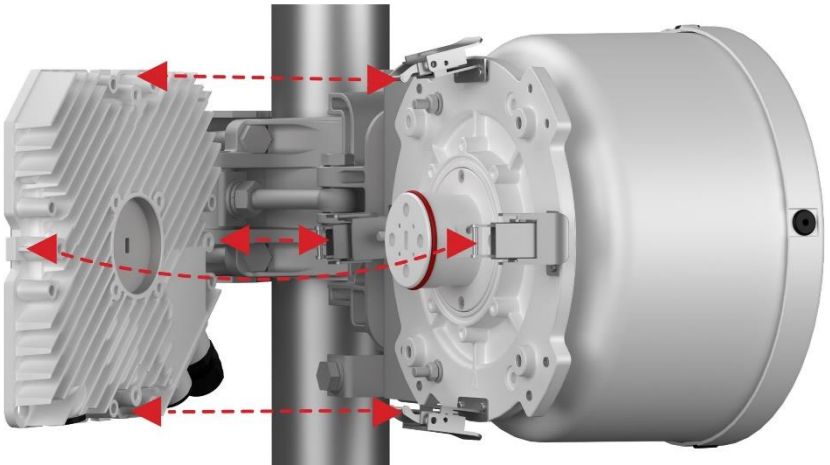
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>Perform the following antenna actions:</p> <ul style="list-style-type: none"> <li>• Remove the plastic sticker <b>(A)</b></li> <li>• Lubricate the O-ring with silicone grease <b>(B)</b>.</li> </ul>  <p>The diagram shows the rear flange of the antenna. A red circle labeled 'A' is positioned over a plastic sticker that reads 'RIMUOVERE PRIMA DI INSTALLARE' and 'REMOVE BEFORE INSTALLATION'. A red arrow points from the sticker to the label 'A'. Another red arrow points from the label 'B' to the O-ring on the flange.</p> |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna, Continued

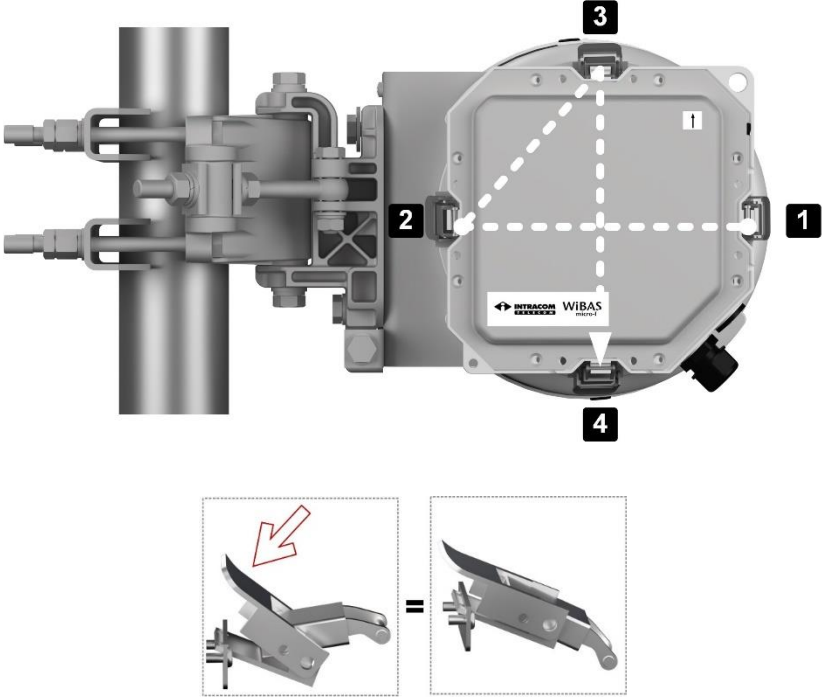
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <p>Perform radio unit installation into the antenna, as follows:</p> <ul style="list-style-type: none"><li>• Unlock the four latches of the antenna:</li><li>• For vertical polarization place radio unit to antenna (<b>HANT2890V</b>) position, as shown below:</li></ul>  <ul style="list-style-type: none"><li>• For horizontal polarization place radio unit to antenna (<b>HANT2890H</b>) position, as shown below:</li></ul>  |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna, Continued

Procedure,  
continued

| Step | Action                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>Lock and secure all four latches according to the pattern below:</p>  |

End of procedure.

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit

### Introduction

This paragraph describes the installation procedures that needs to be followed when combining the Base Station radios and sectoral antennas that are listed below:

|                     |                 | Radio Units Frequency (GHz) – Form Factor |                    |
|---------------------|-----------------|-------------------------------------------|--------------------|
|                     |                 | WiBAS™ G5                                 |                    |
|                     |                 | micro-BS 28                               | evo-BS 24.25-29.50 |
| Antenna Order Codes | HANT2690H-MB    | -                                         | $\sqrt{(2)}$       |
|                     | HANT2690V-MB    |                                           | $\sqrt{(2)}$       |
|                     | HANT2690H-HG-MB |                                           | $\sqrt{(2)}$       |
|                     | HANT2690V-HG-MB |                                           | $\sqrt{(2)}$       |
|                     | HANT2890H-MB    | $\sqrt{(2)}$                              | $\sqrt{(2)}$       |
|                     | HANT2890V-MB    | $\sqrt{(2)}$                              | $\sqrt{(2)}$       |
|                     | HANT2890H-HG-MB | $\sqrt{(2)}$                              | $\sqrt{(2)}$       |
|                     | HANT2890V-HG-MB | $\sqrt{(2)}$                              | $\sqrt{(2)}$       |



WiBAS™ G5 evo-BS requires external GNSS module kit installation. Please refer to [Installing External GNSS Module](#).

*Continued on next page*

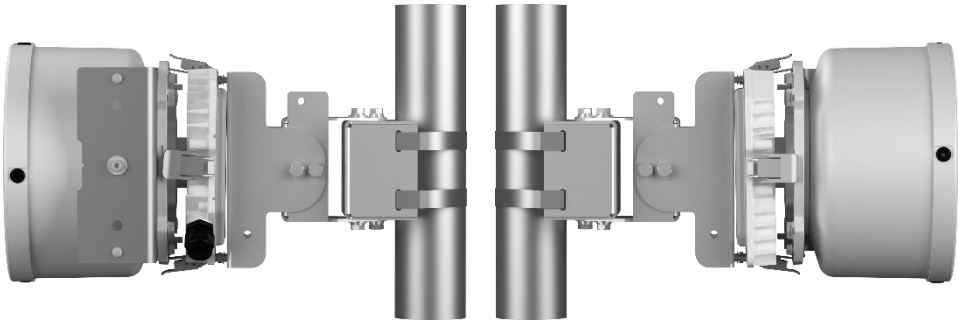
<sup>(2)</sup> Mounting kit with order code **MTK-DMA-BX**.

# WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

**Overview**      The following materials table for installation contains indicative order codes:

| WMBS-28-L-1008-01 or WG5-EVO-BS-27-29                                              |                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |                                                                                                                                                                                                                                                                                                    |
| MTK-DMA-BX                                                                         | HANT2890V-MB                                                                                                                                                                                                                                                                                       |
|  | <div><br/><br/>DO NOT USE ANTENNA POLE MOUNTING KIT.<br/><br/>USE THE MOUNTING KIT WITH ORDER CODE <b>MTK-DMA-BX</b>.</div> |

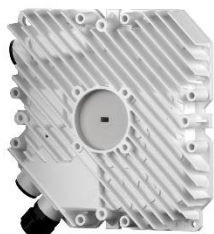
LEFT & RIGHT side view



Continued on next page

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

### Radio unit packing materials

| WMBS-28-L-1008-01 or<br>WG5-EVO-BS-27-29                                          | Packing Materials                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Radio unit.</li> <li>• Materials for installing radio unit to <b>MTK-DMA-BX</b> mounting kit: <ul style="list-style-type: none"> <li>– M5 x 50 mm screws (x4)</li> <li>– M5 washers (x4)</li> <li>– M5 nuts (x4)</li> <li>– Spacers 12 mm (x4) - aluminum</li> </ul> </li> <li>• Materials for installing radio unit to <b>HANT2890V</b> antenna: <ul style="list-style-type: none"> <li>– Set of latches (x4)</li> <li>– M6 x 12 mm screws (x8)</li> <li>– M6 lock washers (x8)</li> </ul> </li> </ul> |

### Antenna packing materials

| HANT2890V-MB                                                                        | Details                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Antenna.</li> <li>• Greasing paste.</li> <li>• Installation leaflet.</li> </ul> <div>  <p><b>DO NOT USE ANTENNA POLE MOUNTING KIT.</b></p> <p><b>USE THE MOUNTING KIT WITH ORDER CODE <b>MTK-DMA-BX</b>.</b></p> </div> |

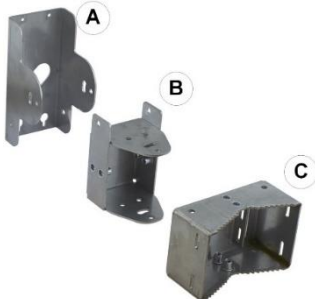
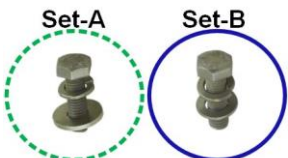
### Tool Kit packing materials

| SEC-ANT-XPOL-KIT                                                                    | Details                                                                                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Universal antenna alignment tool.</li> <li>• 4mm ball-ended hexagon socket screw key.</li> </ul> |

Continued on next page

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

### Pole mounting kit packing materials

| MTK-DMA-BX                                                                         | Packing Materials                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <ul style="list-style-type: none"> <li>Elevation bracket (A).</li> <li>Azimuth bracket (B).</li> <li>Pole bracket (C).</li> </ul>                                                                                                                                                                                               |
|   | <ul style="list-style-type: none"> <li>Pole hose clamps (x2): <ul style="list-style-type: none"> <li>Clamp diameter: 64 mm to 140 mm</li> <li>Pole diameter: 48 mm to 100 mm.</li> </ul> </li> </ul>                                                                                                                            |
|  | <p><b>Set-A:</b></p> <ul style="list-style-type: none"> <li>M8 x 25 mm screws (x4).</li> <li>M8 lock washers (x4).</li> <li>M8 washers stainless steel (x4).</li> </ul> <p><b>Set-B:</b></p> <ul style="list-style-type: none"> <li>M8 x 25 mm screws (x4).</li> <li>M8 lock washers (x4).</li> <li>M8 washers (x4).</li> </ul> |



The following set of materials are not used for this product:



- M5 x 40 mm screws (x4).
- M5 washers (x4).
- M5 flange nut serrated (x4).

### Installation tools

- Adjustable torque wrench
  - with hexagon female bit
  - U-wrench.

### Prerequisites



- For radio/antenna installation using antenna package mounting kit follow the procedure as described in paragraph [WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna](#)
- For radio/antenna installation using **MTK-DMA-BX** follow the procedure in next page (**option-1**).

Continued on next page

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

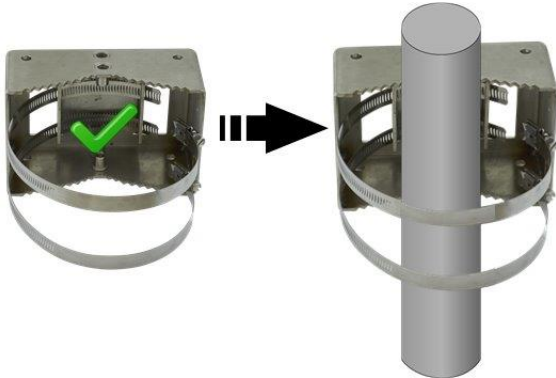
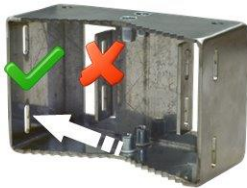
### Procedure (option-1)

#### Prerequisite



Take into account the steps 2, 5, 6, 7 and 8 as described in procedure of [WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna](#) on page 83.

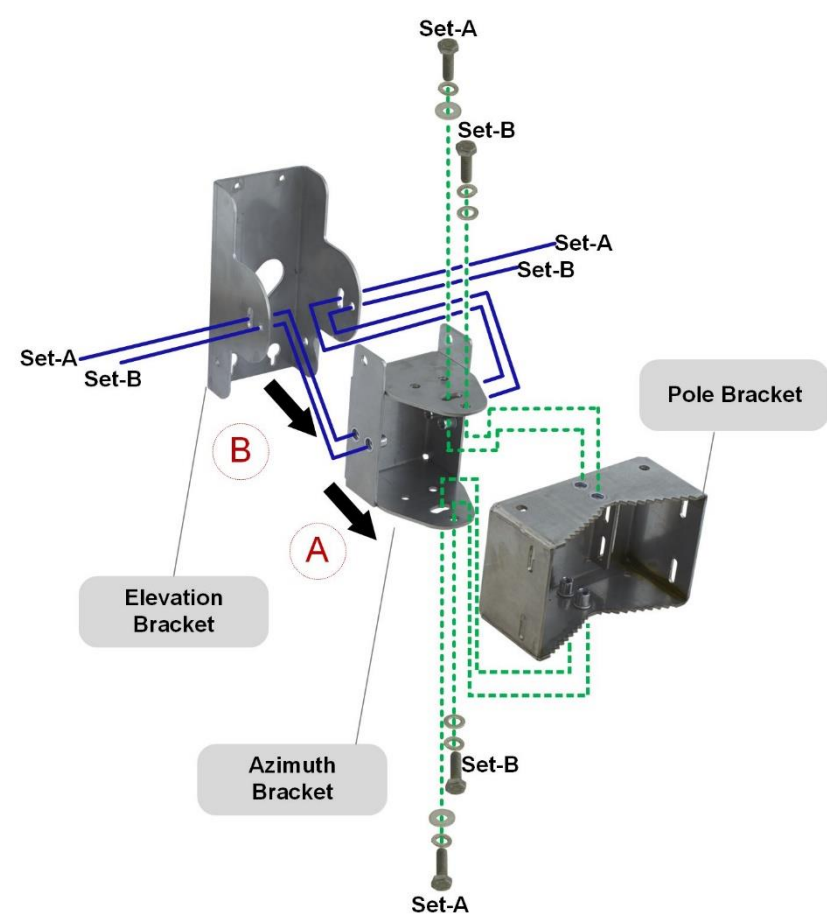
How to install WiBAS™ G5 micro-BS / evo-BS to **HANT2890V** antenna, proceed as follows:

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Perform the following actions:</p> <ul style="list-style-type: none"> <li>Pass the steel hose clamps through the pole bracket respective openings, as shown below:</li> </ul> <p><b>For pole diameter 48 mm up to 159 mm</b></p>  <p><b>For pole diameter 160 mm up to 300 mm</b></p>  <ul style="list-style-type: none"> <li>Use the tool with M5 hexagon female bit to fully tighten the hose latches worm screws.</li> </ul> <p> <b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>7 Nm</b>.</p> |

*Continued on next page*

# WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

Procedure  
(option-1),  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <div><p>Perform the following actions:</p><ul style="list-style-type: none"><li>• Mount azimuth bracket onto the pole bracket <b>(A)</b> and then install Set-A (x 2) and Set-B (x 2), as shown below.</li><li>• Mount elevation bracket onto the azimuth bracket <b>(B)</b> and then install Set-A (x2) and Set-B (x2), as shown below.</li></ul></div> <div></div> <div><ul style="list-style-type: none"><li>• Use the tool with M8 hexagon female bit to slightly tighten the screws.</li></ul><div> The maximum tightening torque is applied to the last step.</div></div> |

Continued on next page

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

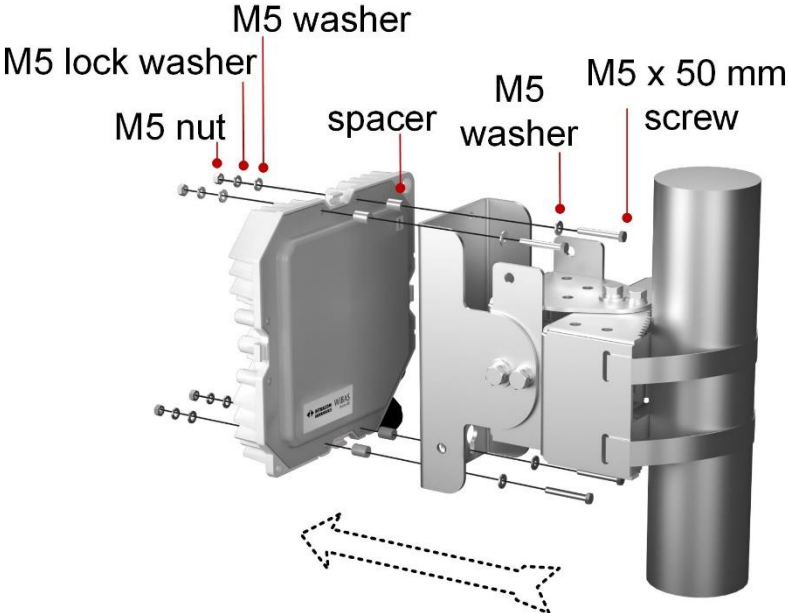
Procedure  
(option-1),  
continued

| Step                                                                               | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |            |                                                                                    |                                                                                      |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 3                                                                                  | <p>Turn the radio unit to reach the desirable polarization, as shown below:</p> <p> For how to turn the radio unit, follow the polarization label.</p> <table border="1"> <thead> <tr> <th>VERTICAL</th><th>HORIZONTAL</th></tr> </thead> <tbody> <tr> <td>  </td><td>  </td></tr> </tbody> </table> | VERTICAL | HORIZONTAL |  |  |
| VERTICAL                                                                           | HORIZONTAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |            |                                                                                    |                                                                                      |
|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |            |                                                                                    |                                                                                      |

*Continued on next page*

# WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

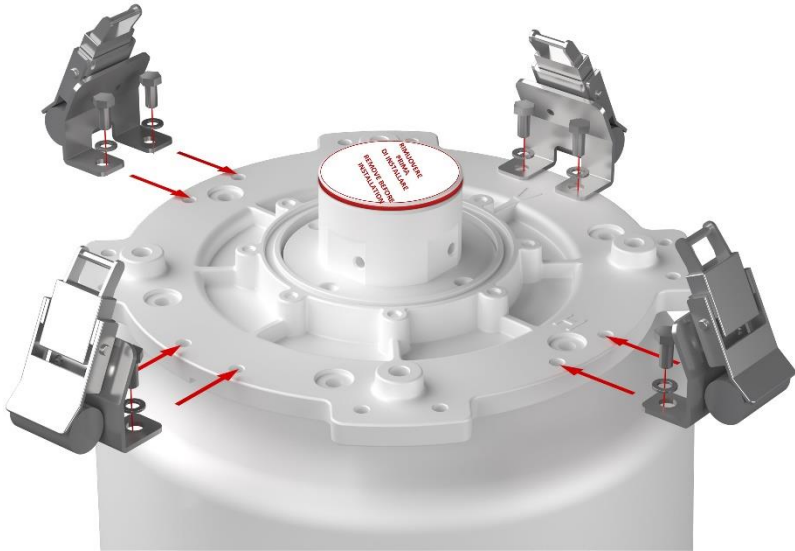
Procedure  
(option-1),  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <p>Perform the following actions:</p> <ul style="list-style-type: none"><li>• Install the radio unit onto the elevation bracket. as shown below:</li></ul> <div><div>Note</div><ul style="list-style-type: none"><li>• From order code <b>WMBS-OB-U-DSDS-SB</b> or <b>WG5-EVO-BS-LB-UB</b> use the following materials:<ul style="list-style-type: none"><li>– M5 x 50 mm screws (x4)</li><li>– M5 washers (x4)</li><li>– M5 nuts (x4)</li><li>– Spacers 12 mm (x4) - aluminum</li></ul></li></ul></div> <div></div> <ul style="list-style-type: none"><li>• Use the tool with M5 hexagon female bit to fully tighten the screws.</li></ul> <div><div></div><div><b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>4.2 Nm</b>.</div></div> |

Continued on next page

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

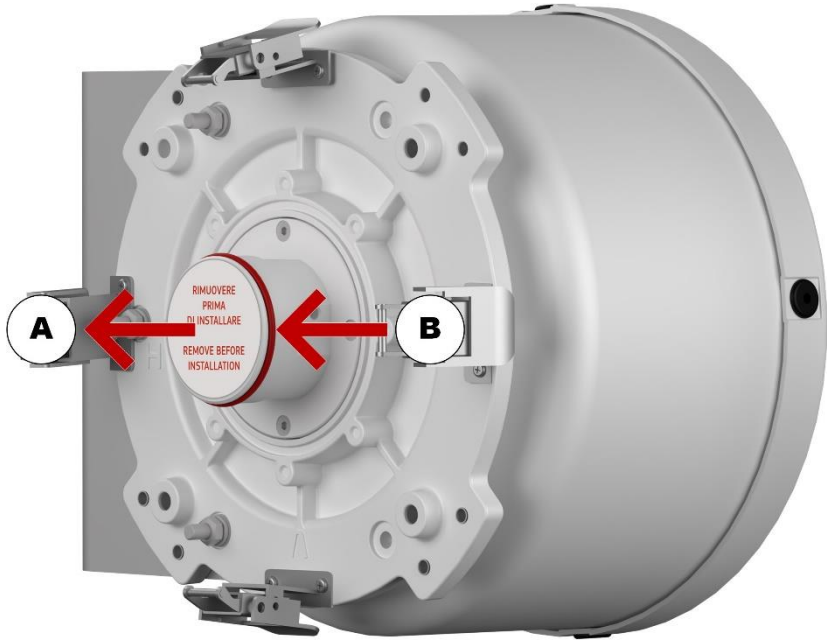
### Procedure (option-1), continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>Use the u-wrench to install the antenna latches, as shown below:</p> <p><b>Note</b></p> <ul style="list-style-type: none"><li>From order code <b>WMBS-OB-U-DSDS-SB</b> or <b>WG5-EVO-BS-LB-UB</b> use the following materials:<ul style="list-style-type: none"><li>– Set of latches (x4)</li><li>– M6 x 12 mm screws (x8)</li><li>– M6 lock washers (x8)</li></ul></li></ul>  <p><b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>2.0 Nm</b>.</p> |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

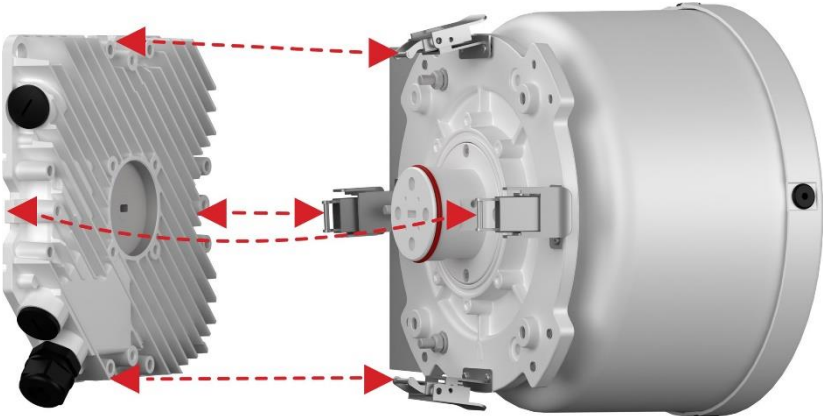
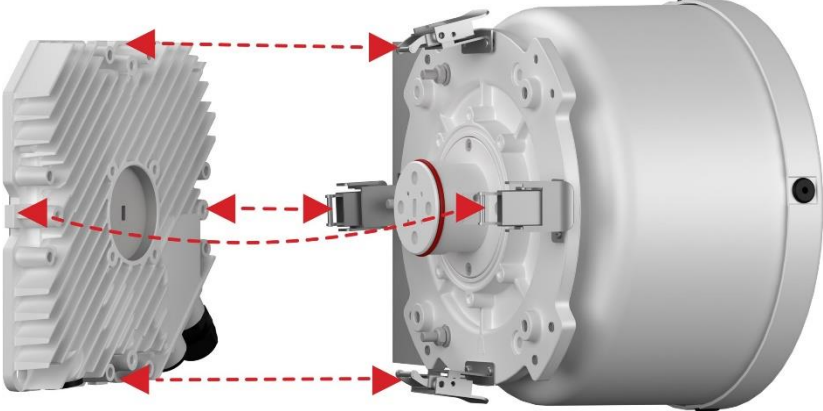
Procedure  
(option-1),  
continued

| Step | Action                                                                                                                                                                                                                                                                                       |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6    | <p>Perform the following antenna actions:</p> <ul style="list-style-type: none"> <li>• Remove the plastic sticker <b>(A)</b></li> <li>• Lubricate the O-ring with silicone grease <b>(B)</b>.</li> </ul>  |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

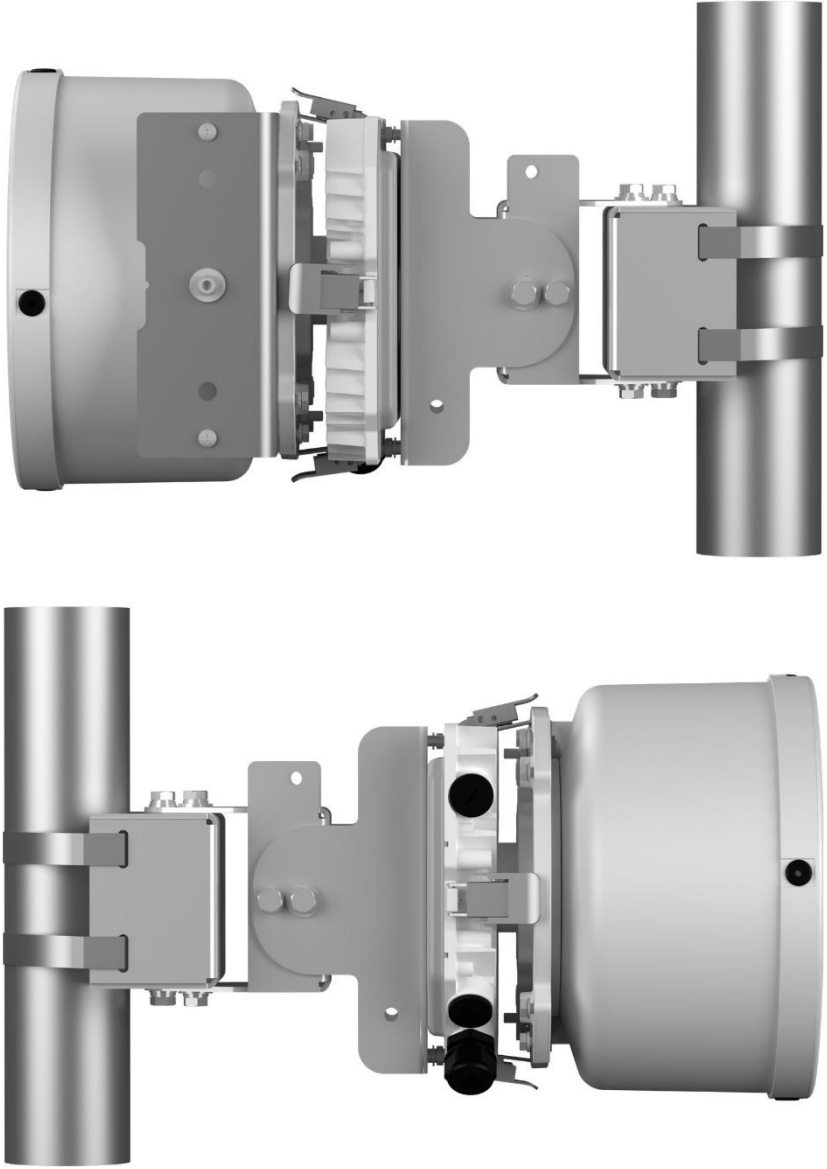
Procedure  
(option-1),  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | <p>Perform radio unit installation into the antenna, as follows:</p> <ul style="list-style-type: none"> <li>• Unlock the four latches of the antenna:</li> <li>• For vertical polarization place radio unit to antenna (<a href="#">HANT2890V</a>) position, as shown below:</li> </ul>  <ul style="list-style-type: none"> <li>• For horizontal polarization place radio unit to antenna (<a href="#">HANT2890H</a>) position, as shown below:</li> </ul>  |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 Integrated Antenna with MTK-DMA-BX Mounting Kit, Continued

Procedure  
(option-1),  
continued

| Step | Action                                                                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | <p>Verify that the installation appears, as follows (vertical) :</p>                                                                                                                        |
| 9    | <p>Use the U-wrench tool to fully tighten the M8 screws of the mounting kit.</p> <p> <b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>17.8 Nm</b>.</p> |

End of procedure.

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit

### Introduction

This paragraph describes the installation procedures that needs to be followed when combining the Base Station radios and sectoral antennas that are listed below:

|                        |             | Radio Units Frequency (GHz) –<br>Form Factor |                       |
|------------------------|-------------|----------------------------------------------|-----------------------|
|                        |             | WiBAS™ G5                                    |                       |
|                        |             | micro-BS<br>28                               | evo-BS<br>24.25-29.50 |
| Antenna<br>Order Codes | HANT262890H | $\sqrt{(2)}$                                 | $\sqrt{(2)}$          |
|                        | HANT262890V | $\sqrt{(2)}$                                 | $\sqrt{(2)}$          |
|                        | HANT28180H  | $\sqrt{(2)}$                                 | $\sqrt{(2)}$          |
|                        | HANT28180V  | $\sqrt{(2)}$                                 | $\sqrt{(2)}$          |



WiBAS™ G5 evo-BS requires external GNSS module kit installation. Please refer to [Installing External GNSS Module](#).

*Continued on next page*

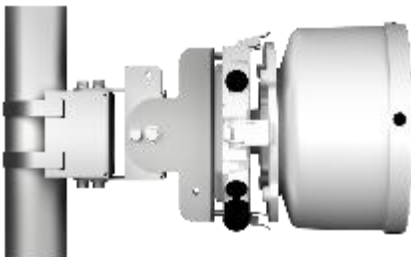
<sup>(2)</sup> Mounting kit with order code **MTK-DMA-BX**.

# WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

**Overview**      The following materials table for installation contains indicative order codes:

| WMBS-28-L-1008-01 or WG5-EVO-BS-24-26 / WG5-EVO-BS-27-29                           |                                                                                     |                                                                                      |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |                                                                                     |                                                                                      |
| MTK-DMA-BX                                                                         | HANT262890V                                                                         | HANT28180V                                                                           |
|  |  |  |

·WiBAS™ G5 micro-BS / evo-BS and sectoral 90°



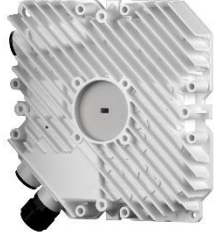
WiBAS™ G5 micro-BS / evo-BS and sectoral 180°



Continued on next page

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

### Radio unit packing materials

| WMBS-28-L-1008-01 or<br>WG5-EVO-BS-24-26 /<br>WG5-EVO-BS-27-29                    | Packing Materials                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Radio unit.</li> <li>• Materials for installing radio unit to <b>MTK-DMA-BX</b> mounting kit: <ul style="list-style-type: none"> <li>– M5 x 50 mm screws (x4)</li> <li>– M5 washers (x4)</li> <li>– M5 nuts (x4)</li> <li>– Spacers 12 mm (x4) - aluminum</li> </ul> </li> <li>• Materials for installing radio unit to <b>HANT28180V</b>, <b>HANT28180H</b>, <b>HANT262890V</b>, <b>HANT262890H</b> antennas: <ul style="list-style-type: none"> <li>– Set of latches (x4)</li> <li>– M6 x 12 mm screws (x8)</li> <li>– M6 lock washers (x8)</li> </ul> </li> </ul> |

### Antenna packing materials

| HANT262890V                                                                         | Packing Materials                                                                                                        |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Antenna.</li> <li>• Greasing paste.</li> <li>• Installation leaflet.</li> </ul> |

| HANT28180V                                                                          | Packing Materials                                                                                                        |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Antenna.</li> <li>• Greasing paste.</li> <li>• Installation leaflet.</li> </ul> |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

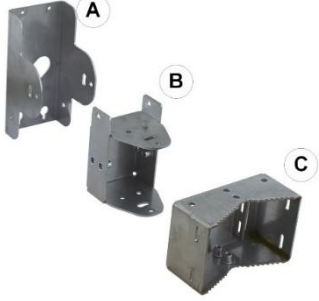
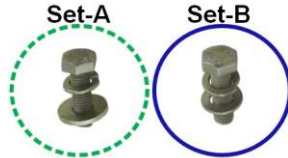
Tool Kit  
packing  
materials

| SEC-ANT-XPOL-KIT                                                                  | Details                                                                                                                                |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>• Universal antenna alignment tool.</li><li>• 4mm ball-ended hexagon socket screw key.</li></ul> |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

### Pole mounting kit packing materials

| MTK-DMA-BX                                                                         | Packing Materials                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <ul style="list-style-type: none"> <li>Elevation bracket (A).</li> <li>Azimuth bracket (B).</li> <li>Pole bracket (C).</li> </ul>                                                                                                                                                                                               |
|   | <ul style="list-style-type: none"> <li>Pole hose clamps (x2): <ul style="list-style-type: none"> <li>Clamp diameter: 64 mm to 140 mm</li> <li>Pole diameter: 48 mm to 100 mm.</li> </ul> </li> </ul>                                                                                                                            |
|  | <p><b>Set-A:</b></p> <ul style="list-style-type: none"> <li>M8 x 25 mm screws (x4).</li> <li>M8 lock washers (x4).</li> <li>M8 washers stainless steel (x4).</li> </ul> <p><b>Set-B:</b></p> <ul style="list-style-type: none"> <li>M8 x 25 mm screws (x4).</li> <li>M8 lock washers (x4).</li> <li>M8 washers (x4).</li> </ul> |



The following set of materials are not used for this product:



- M5 x 40 mm screws (x4).
- M5 washers (x4).
- M5 flange nut serrated (x4).

### Installation tools

- Adjustable torque wrench
  - with hexagon female bit
  - U-wrench.

*Continued on next page*

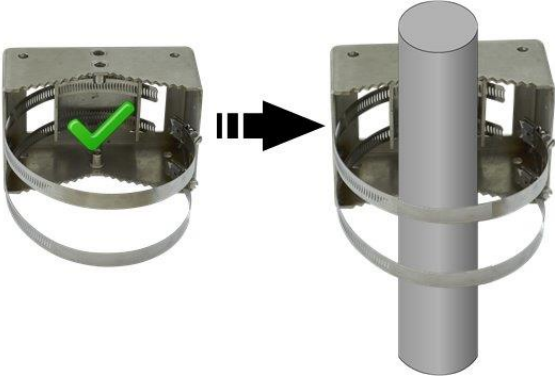
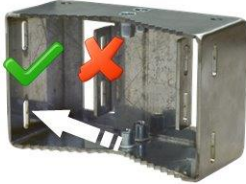
# WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

Procedure

**Prerequisite**  Take into account the steps 2, 5, 6, 7 and 8 as described in procedure of [WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna](#) on page 83.

How to install WiBAS™ G5 micro-BS / evo-BS to [HANT28180V](#) or [HANT28180H](#) antenna, proceed as follows:

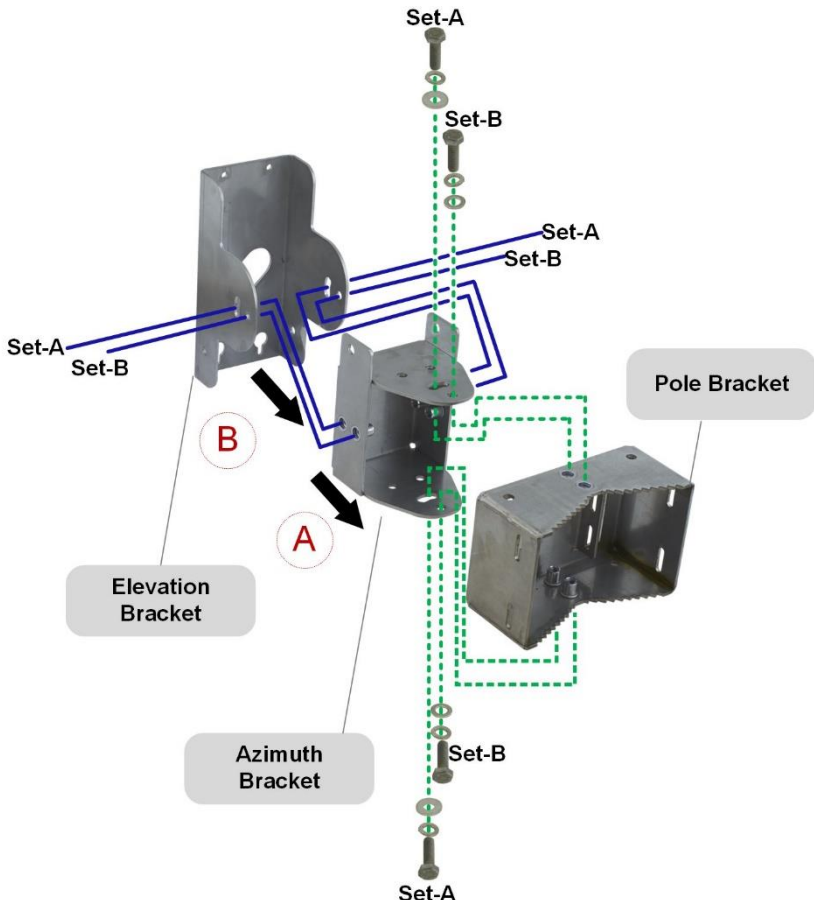
 The installation procedure for sectoral 90° or 180° is common.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Perform the following actions:</p> <ul style="list-style-type: none"><li>• Pass the steel hose clamps through the pole bracket respective openings, as shown below:</li></ul> <p><b>For pole diameter 48 mm up to 159 mm</b></p>  <p><b>For pole diameter 160 mm up to 300 mm</b></p>  <ul style="list-style-type: none"><li>• Use the tool with M5 hexagon female bit to fully tighten the hose clamps worm screws.</li></ul> <p> <b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque 7 Nm.</p> |

Continued on next page

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p>Perform the following actions:</p> <ul style="list-style-type: none"> <li>• Mount azimuth bracket onto the pole bracket (<b>A</b>) and then install Set-A (x 2) and Set-B (x 2), as shown below.</li> <li>• Mount elevation bracket onto the azimuth bracket (<b>B</b>) and then install Set-A (x2) and Set-B (x2), as shown below.</li> </ul>  <ul style="list-style-type: none"> <li>• Use the tool with M8 hexagon female bit to slightly tighten the screws.</li> </ul> <p> The maximum tightening torque is applied to the last step.</p> |

Continued on next page

# WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

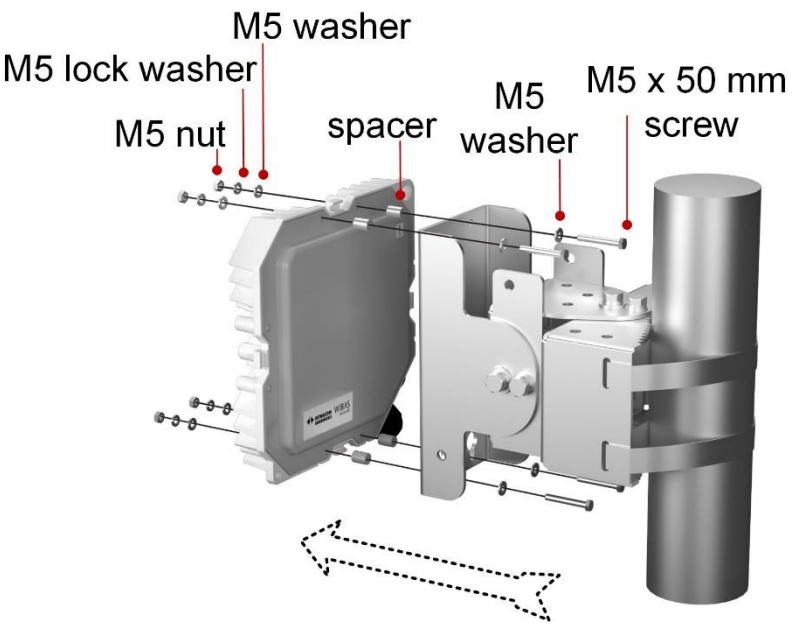
Procedure,  
continued

| Step                                                                               | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |            |                                                                                    |                                                                                      |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 3                                                                                  | <p>Turn the radio unit to reach the desirable polarization, as shown below:</p> <p> For how to turn the radio unit, follow the polarization label.</p> <table><tr><th>VERTICAL</th><th>HORIZONTAL</th></tr><tr><td></td><td></td></tr></table> | VERTICAL | HORIZONTAL |  |  |
| VERTICAL                                                                           | HORIZONTAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |            |                                                                                    |                                                                                      |
|  |                                                                                                                                                                                                                                                                                                                                                                                                                   |          |            |                                                                                    |                                                                                      |

Continued on next page

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

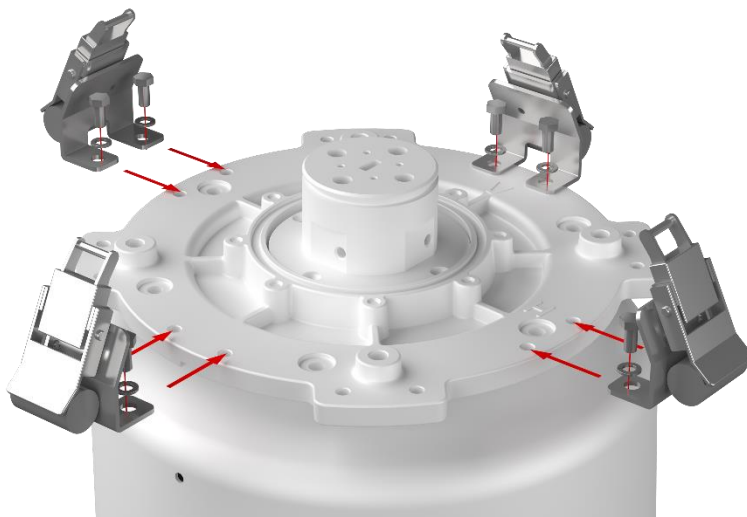
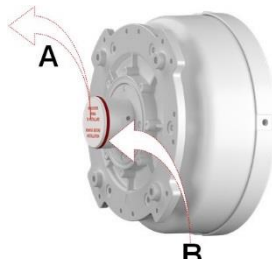
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <p>Perform the following actions:</p> <ul style="list-style-type: none"> <li>Install the radio unit onto the elevation bracket. as shown below:</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>From order code <b>WMBS-OB-U-DSDS-SB</b> or <b>WG5-EVO-BS-LB-UB</b> use the following materials: <ul style="list-style-type: none"> <li>M5 x 50 mm screws (x4)</li> <li>M5 washers (x4)</li> <li>M5 nuts (x4)</li> <li>Spacers 12 mm (x4) - aluminum</li> </ul> </li> </ul>  <ul style="list-style-type: none"> <li>Use the tool with M5 hexagon female bit to fully tighten the screws.</li> </ul> <p><b>Warning:</b> Do not over tighten. Adjust the tool for applying maximum tightening torque <b>4.2 Nm</b>.</p> |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

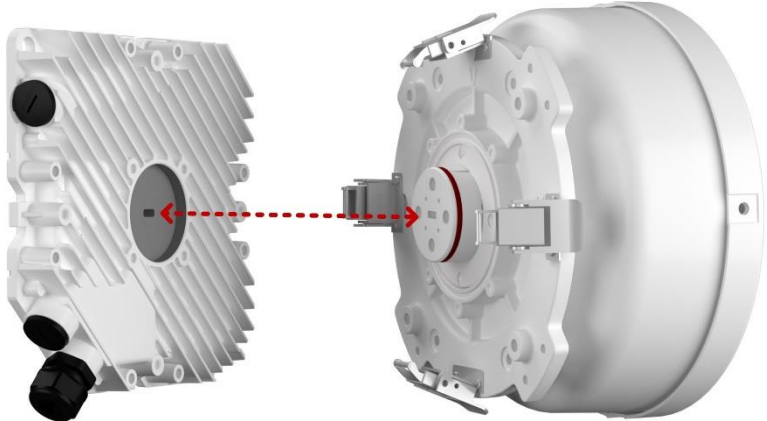
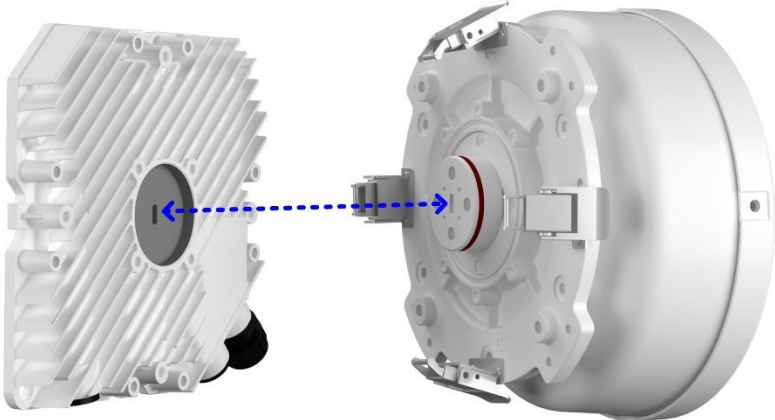
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>Use the u-wrench to install the antenna latches, as shown below:</p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>From order code <b>WMBS-OB-U-DSDS-SB</b> or <b>WG5-EVO-BS-LB-UB</b> use the following materials: <ul style="list-style-type: none"> <li>– Set of latches (x4)</li> <li>– M6 x 12 mm screws (x8)</li> <li>– M6 lock washers (x8)</li> </ul> </li> </ul>  <p><b>⚠ Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>2.0 Nm</b>.</p> |
| 6    | <p>Perform the following antenna actions:</p> <ul style="list-style-type: none"> <li>• Remove the plastic sticker <b>(A)</b></li> <li>• Lubricate the O-ring with silicone grease <b>(B)</b>.</li> </ul>                                                                                                                                                                                                                                                                                            |

Continued on next page

## WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

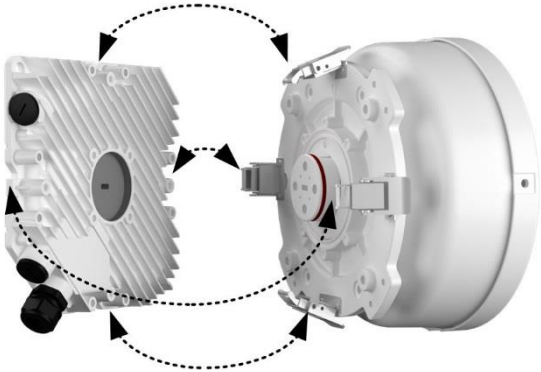
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | <p>For vertical polarization place antenna (<a href="#">HANT28180V</a>) and radio unit, as shown below:</p>  <p>For horizontal polarization place antenna (<a href="#">HANT28180H</a>) and radio unit, as shown below:</p>  |

*Continued on next page*

# WiBAS G5 micro-BS / evo-BS and Sectoral 90 or 180 Antenna with MTK-DMA-BX Mounting Kit, Continued

Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | <p>Open antenna latches and then mount the antenna onto the radio as shown below (the following picture shows vertical polarization):</p>  <p>Lock and secure all antenna latches.</p>       |
| 9    | <p>Verify that the installation appears, as follows:</p>                                                                                                                                   |
| 10   | <p>Use the U-wrench tool to fully tighten the M8 screws of the mounting kit.</p> <p> <b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>17.8 Nm</b>.</p> |

End of procedure.

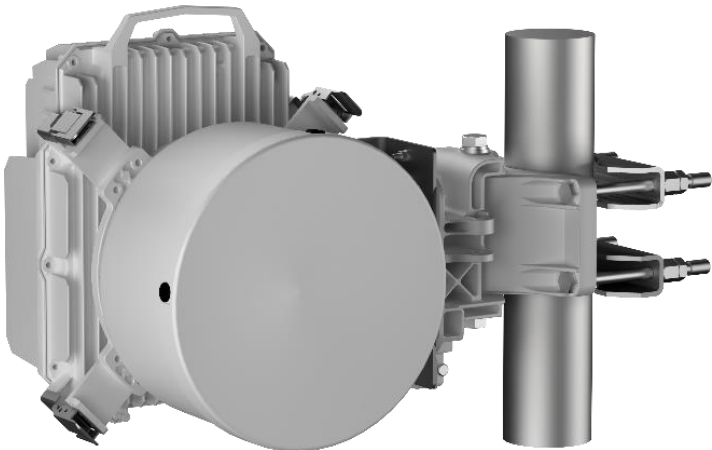
## WiBAS G5 dual-BS and Dual-Polarization Sectoral 90 Integrated Antenna

**Introduction** This paragraph describes the installation procedures that needs to be followed when combining the Base Station radios and sectoral antennas that are listed below:

|                    |                  | Radio Units Frequency (GHz) – Form Factor |
|--------------------|------------------|-------------------------------------------|
|                    |                  | WiBAS™ G5                                 |
|                    |                  | dual-BS 28                                |
| Antenna Order Code | HANT262890-DP-MB | √(1)                                      |

**Overview** The following materials table for installation contains indicative order codes:

| WG5-DUAL-BS-L-1008-SB                                                               | HANT262890-DP-MB                                                                     |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |



Continued on next page

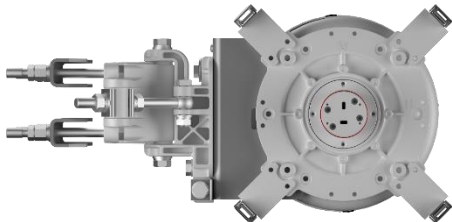
(1) Mounting kit from antenna package.

## WiBAS G5 dual-BS and Dual-Polarization Sectoral 90 Integrated Antenna, Continued

### Radio unit packing materials

| WG5-DUAL-BS-L-1008-SB                                                                                                                                                                                                                                                                                                                                                 | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>The image shows the radio unit (A) and its packing materials. (A) is a large, silver, rectangular radio unit with a handle on top. (B) is a small black M20 gland. (C) is a DC power supply connector with two sockets. (D) are two terminal lugs. (E) is an extruder tool.</p> | <ul style="list-style-type: none"> <li>• WiBAS™ G5 dual-BS radio unit (A).</li> <li>• M20 Gland for the SFP interfaces for cable diameter range 4.5 mm to 7.5 mm (blue seal) (B).</li> <li>• DC power supply connector, 2 sockets, solder type, IP68, UV rated, industrial (PWR-CONN-GX) (C).</li> </ul> <p><b>Note</b> Applicable cable diameters range is 6.8 mm to 9.5 mm.</p> <ul style="list-style-type: none"> <li>• 2 x terminal lugs (1 x M5 x 16 mm<sup>2</sup> &amp; 1 x M5 x 6 mm<sup>2</sup>) for grounding cable (D).</li> <li>• Extruder (to unplug SFP module) (E).</li> </ul> |

### Antenna packing materials

| HANT262890-DP-MB                                                                                                                                                                                                                                                                                                                        | Details                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>The image shows the antenna (HANT262890-DP-MB) and its pole mounting kit. The antenna is a large, silver, rectangular unit with four mounting brackets on the sides. The pole mounting kit includes a pole, a bracket, and a mounting plate.</p> | <ul style="list-style-type: none"> <li>• Antenna.</li> <li>• Pole mounting kit.</li> <li>• Greasing paste.</li> <li>• Installation leaflet.</li> </ul> |

### Tool Kit packing materials

| SEC-ANT-XPOL-KIT                                                                                                                                                                                                                                     | Details                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>The image shows the universal antenna alignment tool (SEC-ANT-XPOL-KIT). It is a black, L-shaped tool with a hexagonal socket at the end of the long arm.</p> | <ul style="list-style-type: none"> <li>• Universal antenna alignment tool.</li> <li>• 4mm ball-ended hexagon socket screw key.</li> </ul> |

Continued on next page

## WiBAS G5 dual-BS and Dual-Polarization Sectoral 90 Integrated Antenna, Continued

### Prerequisites



Assembly the antenna as per the installation manual inside the box.

### Precautions



This procedure includes antenna adjustment verticality with respect to the ground.

### Installation tools

Adjustable torque U-wrench, digital inclinometer, wrench (13 mm) and screw drivers.

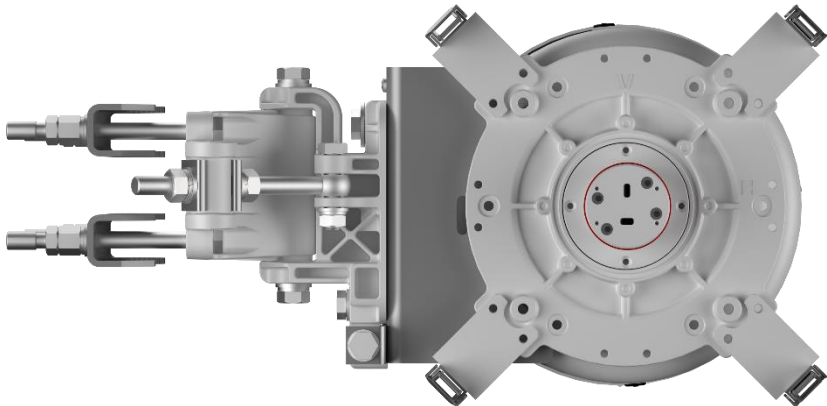
### Procedure

#### Prerequisite



**Take into account the steps 2, 5, 6, 7 and 8 as described in procedure of [WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna](#) on page [83](#).**

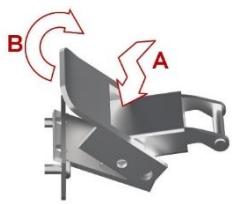
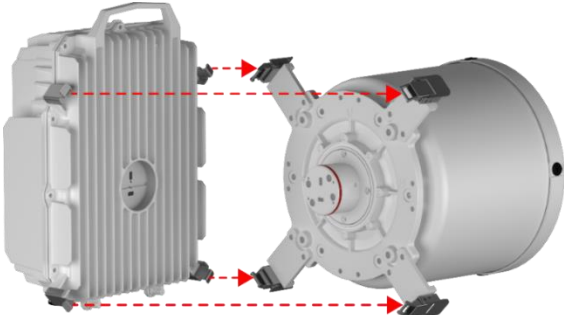
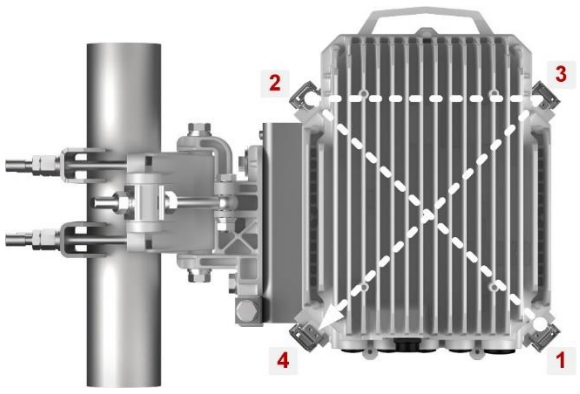
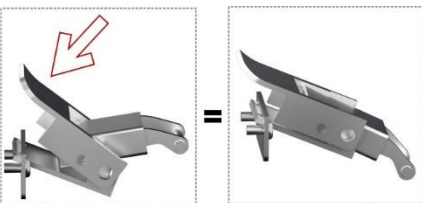
How to install radio unit with antenna, proceed as follows:

| Step | Action                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Assembly the antenna as per the installation manual inside the box. The following picture is an assembly preview</p>  |

*Continued on next page*

## WiBAS G5 dual-BS and Dual-Polarization Sectoral 90 Integrated Antenna, Continued

Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p>Perform radio unit installation into the antenna, as follows:</p> <ul style="list-style-type: none"> <li>• Remove antenna feeder plastic protection sticker.</li> <li>• Lubricate the antenna O-ring with silicone grease.</li> <li>• Unlock the four latches of the antenna, as shown below:</li> </ul>  <ul style="list-style-type: none"> <li>• Mount the radio unit onto the antenna as shown below</li> </ul>  <ul style="list-style-type: none"> <li>• Lock and secure all four latches according to the pattern below:</li> </ul>   |

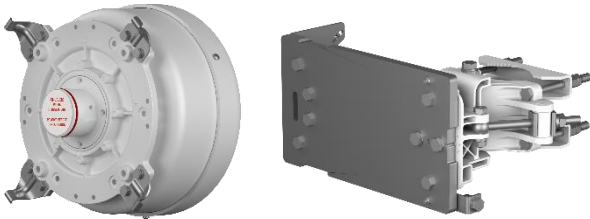
End of procedure.

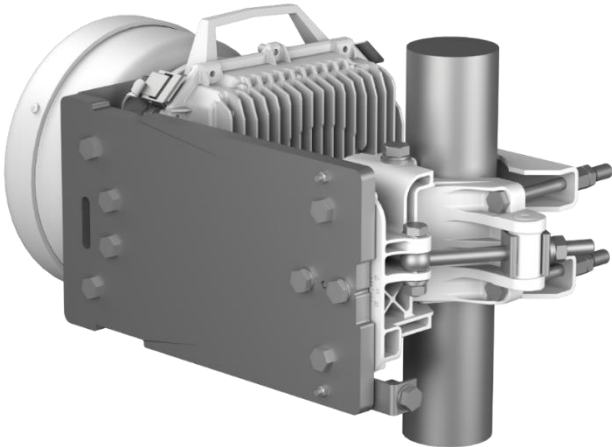
## WiBAS OSDR-HUB and Sectoral 180 Integrated Antenna

**Introduction** This paragraph describes the installation procedures that needs to be followed when combining the Base Station radios and sectoral antennas that are listed below:

|                    |               | Radio Units Frequency (GHz) – Form Factor |
|--------------------|---------------|-------------------------------------------|
|                    |               | WiBAS™ OSDR-HUB                           |
|                    |               | 28                                        |
| Antenna Order Code | HANT28180H-MB | √ <sup>(1)</sup>                          |
|                    | HANT28180V-MB | √ <sup>(1)</sup>                          |

**Overview** The following materials table for installation contains indicative order codes:

| OSDR-28-H-1008-01                                                                  | HANT28180V-MB                                                                        |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |



Continued on next page

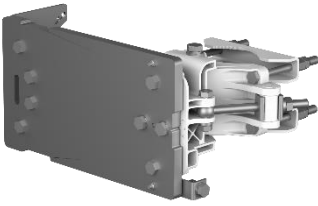
<sup>(1)</sup> Mounting kit from antenna package.

## WiBAS OSDR-HUB and Sectoral 180 Integrated Antenna, Continued

### Radio unit packing materials

| OSDR-28-H-1008-01                                                                 | Details                                                         |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Radio unit.</li> </ul> |

### Antenna packing materials

| HANT28180V-MB                                                                                                                                                                 | Details                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><br> | <ul style="list-style-type: none"> <li>• Antenna</li> <li>• Pole mounting kit.</li> <li>• Greasing paste.</li> <li>• Installation leaflet.</li> </ul> |

### Tool Kit packing materials

| SEC-ANT-XPOL-KIT                                                                    | Details                                                                                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Universal antenna alignment tool.</li> <li>• 4mm ball-ended hexagon socket screw key.</li> </ul> |

*Continued on next page*

## WiBAS OSDR-HUB and Sectoral 180 Integrated Antenna,

Continued

---

### Prerequisites



Assembly the antenna as per the installation manual inside the box.

---

### Precautions



This procedure includes antenna adjustment verticality with respect to the ground.

---

### Installation tools

Adjustable torque U-wrench, allen key and screw drivers.

---

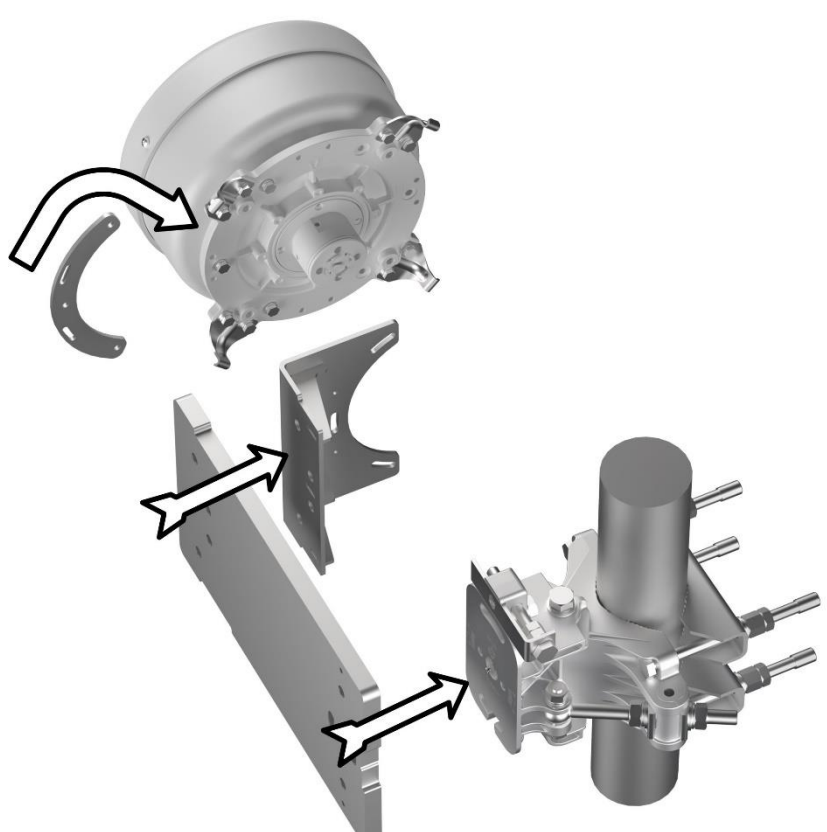
*Continued on next page*

## WiBAS OSDR-HUB and Sectoral 180 Integrated Antenna, Continued

### Procedure

**Prerequisite**  Take into account the steps 2, 5, 6, 7 and 8 as described in procedure of [WiBAS OSDR-HUB and Sectoral 90 Integrated Antenna](#) on page 83.

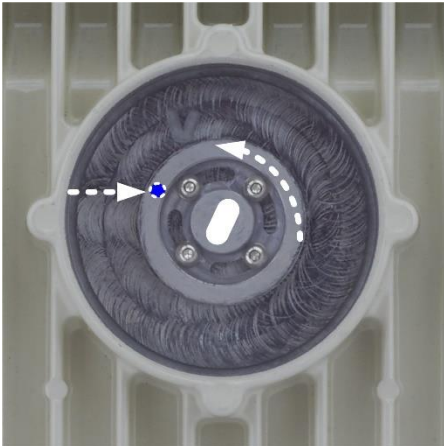
How to install the WiBAS™ OSDR-HUB to **HANT28180V-MB** antenna, proceed as follows:

| Step | Action                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Assembly the antenna as per the installation manual inside the box. The following picture is an assembly preview:</p>  |

*Continued on next page*

## WiBAS OSDR-HUB and Sectoral 180 Integrated Antenna, Continued

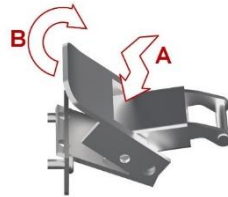
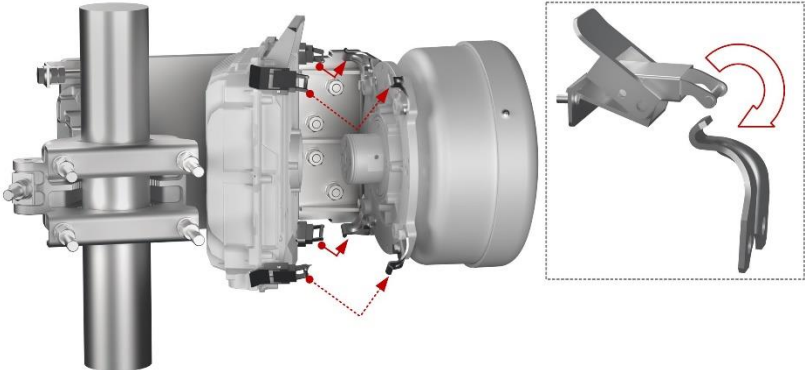
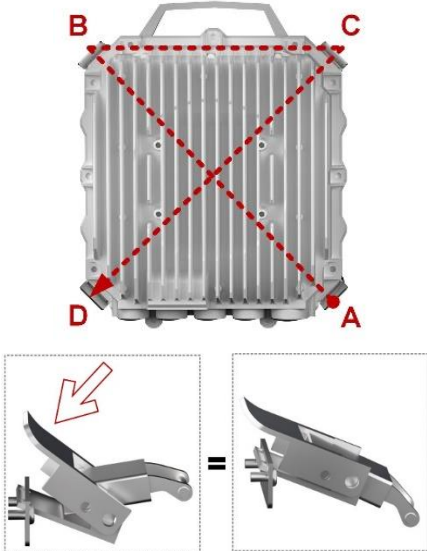
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p>Perform radio antenna polarization adjustment, as follows:</p> <ul style="list-style-type: none"> <li>For <b>vertical polarization</b> place antenna (<b>HANT28180V-MB</b>) and radio unit, as shown below: <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Radio unit wave guide</p>  </div> <div style="text-align: center;"> <p>Antenna feeder</p>  </div> </div> </li> <li>For <b>horizontal polarization</b> perform the following actions: <ul style="list-style-type: none"> <li>Use the allen key to loosen the four screws at the waveguide port of the radio unit (do not remove the screws) and then <b>TURN</b> the polarizer, as shown below.</li> <li>Place antenna (<b>HANT28180H-MB</b>), as shown below.</li> </ul> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> </li> </ul> <div style="margin-top: 20px;">  <p>Do not over tighten the screws. Apply maximum tightening torque <b>0.6 Nm</b>.</p> <p> <b>Note</b> The misalignment of slots between the movable part and the stationary part of the radio waveguide port is intentional and does not indicate a problem.</p> </div> |

*Continued on next page*

## WiBAS OSDR-HUB and Sectoral 180 Integrated Antenna, Continued

### Procedure, continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>Perform radio unit installation into the antenna, as follows:</p> <ul style="list-style-type: none"> <li>• Lubricate the antenna O-ring with silicone grease.</li> <li>• Unlock the four latches of the radio unit, as shown below:</li> </ul>  <ul style="list-style-type: none"> <li>• Pass the latches to antenna hooks, as shown below:</li> </ul>  <ul style="list-style-type: none"> <li>• Lock and secure all four latches according to the pattern below:</li> </ul>  |

End of procedure.

## WiBAS OSDR-HUB and Omnidirectional 360 Antenna with OSDR-360-ANT-MNT-KIT Mounting Kit

### Introduction

This paragraph describes the installation procedures that needs to be followed when combining the Base Station radios and sectoral antennas that are listed below:

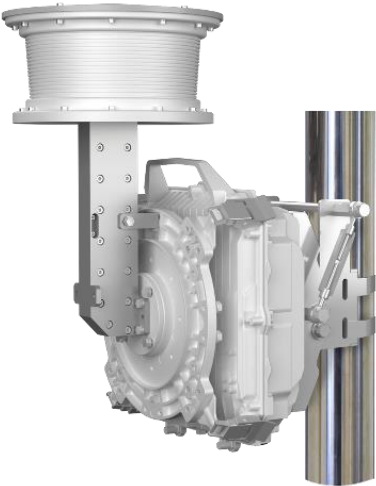
|                          |              | Radio Units Frequency (GHz) –<br>Form Factor |                  |
|--------------------------|--------------|----------------------------------------------|------------------|
|                          |              | WiBAS™ OSDR-HUB                              |                  |
|                          |              | 26                                           | 28               |
| Antenna<br>Order<br>Code | HANT2628360V | √ <sup>(3)</sup>                             | √ <sup>(3)</sup> |

*Continued on next page*

<sup>(3)</sup> Mounting kit with order code **OSDR-360-ANT-MNT-KIT** and adaptation plate with order code **OSDR26-360-ANT-ADAPT-KIT** or **OSDR28-360-ANT-ADAPT-KIT**.

# WiBAS OSDR-HUB and Omnidirectional 360 Antenna with OSDR-360-ANT-MNT-KIT Mounting Kit, Continued

**Overview**      The following materials table for installation contains indicative order codes:

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>OSDR-28-H-1008-01</b>                                                            |                                                                                      |
|   |                                                                                      |
| <b>HANT2628360V</b>                                                                 | <b>OSDR-360-ANT-MNT-KIT</b>                                                          |
|   |  |
| <b>OSDR26-360-ANT-ADAPT-KIT<br/>OSDR28-360-ANT-ADAPT-KIT</b>                        |                                                                                      |
|  |  |

Continued on next page

## WiBAS OSDR-HUB and Omnidirectional 360 Antenna with OSDR-360-ANT-MNT-KIT Mounting Kit, Continued

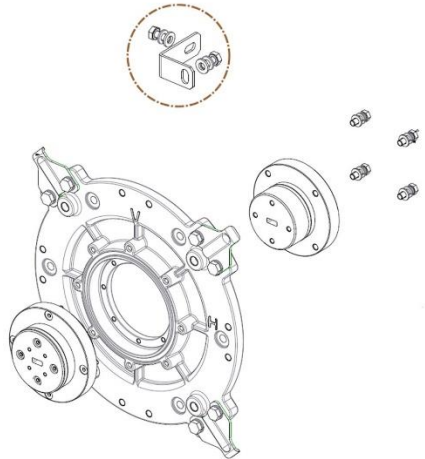
Radio unit  
packing  
material

| OSDR-28-H-1008-01                                                                 | Packing Materials                                             |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>Radio unit.</li> </ul> |

Antenna  
packing  
materials

| HANT2628360V                                                                       | Packing Materials                                                                                                  |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>Antenna.</li> <li>Installation leaflet.</li> <li>Greasing paste.</li> </ul> |

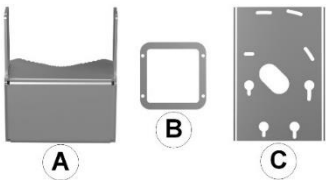
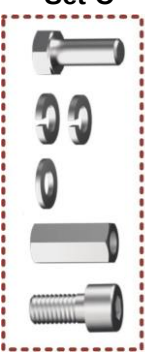
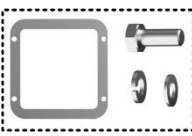
Antenna  
adaptation kit  
packing  
materials

| OSDR26-360-ANT-ADAPT-KIT<br>OSDR28-360-ANT-ADAPT-KIT                                | Packing Materials                                                                                        |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>Antenna adaptation kit.</li> <li>Installation leaflet.</li> </ul> |

*Continued on next page*

## WiBAS OSDR-HUB and Omnidirectional 360 Antenna with OSDR-360-ANT-MNT-KIT Mounting Kit, Continued

### Pole mounting kit packing materials

| OSDR-360-ANT-MNT-KIT                                                                                            |                                                                                                         | Packing Materials                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                |                                                                                                         | <ul style="list-style-type: none"> <li>• Omni pillar bracket <b>(A)</b>.</li> <li>• Spacer plate <b>(B)</b>.</li> <li>• Mounting bracket <b>(C)</b>.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                |                                                                                                         | <ul style="list-style-type: none"> <li>• Pole hose clamps (x2): <ul style="list-style-type: none"> <li>– Clamp diameter: 64 mm to 140 mm</li> <li>– Pole diameter: 48 mm to 100 mm.</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>Set-A</b></p>            | <p><b>Set-B</b></p>    | <ul style="list-style-type: none"> <li>• <b>Set-A:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x2).</li> <li>– M8 lock washers (x2).</li> <li>– M8 washers stainless steel (x2).</li> </ul> </li> <li>• <b>Set-B:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x2).</li> <li>– M8 lock washers (x2).</li> <li>– M8 washers (x2).</li> </ul> </li> </ul>                                                                                                                                                                                                              |
| <p><b>Set-C</b></p>          | <p><b>Set-D</b></p>  | <ul style="list-style-type: none"> <li>• <b>Set-C:</b> <ul style="list-style-type: none"> <li>– M8 x 20 mm screw (x1).</li> <li>– M8 lock washer (x2).</li> <li>– M8 washer (x1).</li> <li>– M8 hexagon spacer L=17 mm (x1).</li> <li>– M8 x 16 mm screw (x1).</li> </ul> </li> <li>• <b>Set-D:</b> <ul style="list-style-type: none"> <li>– M8 x 20 mm screw (x1).</li> <li>– M8 lock washer (x2).</li> <li>– M8 washer (x1).</li> <li>– M8 hexagon spacer L=17 mm (x1).</li> <li>– Round tube (x1).</li> <li>– M8 washers stainless steel (x1).</li> <li>– M8 x 150 mm screw (x1).</li> </ul> </li> </ul> |
| <p><b>Set-C &amp; D</b></p>  |                                                                                                         | <ul style="list-style-type: none"> <li>• <b>Set-C &amp; D:</b> <ul style="list-style-type: none"> <li>– M5 turnbuckle (x1)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>Set-E</b></p>          |                                                                                                         | <ul style="list-style-type: none"> <li>• <b>Set-E:</b> <ul style="list-style-type: none"> <li>– Spacer plate (x1).</li> <li>– M5 washer (x4).</li> <li>– M5 lock washer (x4).</li> <li>– M5 x 20 mm screw (x1).</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                      |

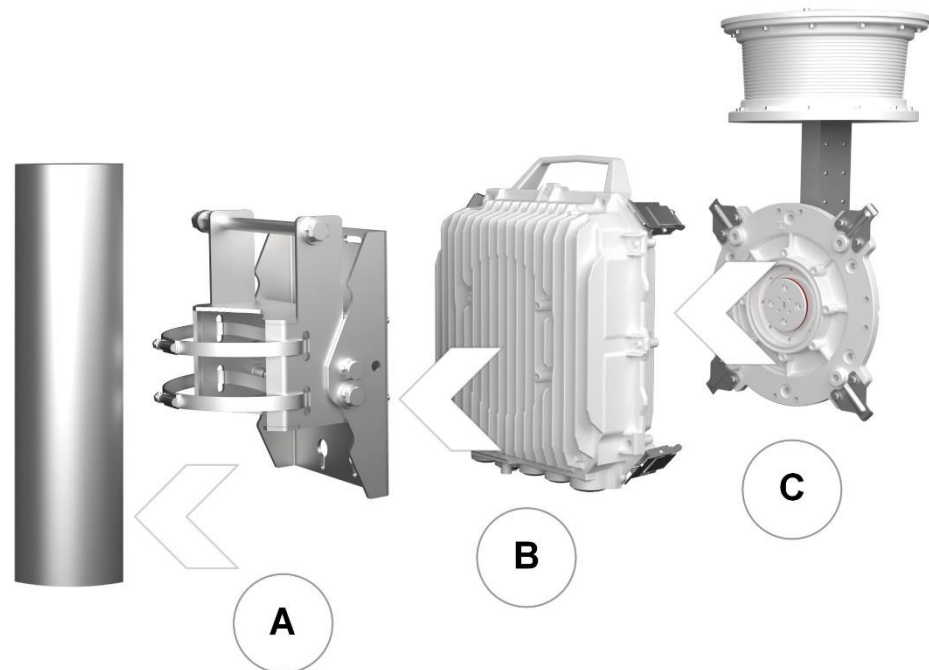
Continued on next page

## WiBAS OSDR-HUB and Omnidirectional 360 Antenna with OSDR-360-ANT-MNT-KIT Mounting Kit, Continued

### Installation tools

- Adjustable torque wrench
  - with hexagon female bit
  - U-wrench.
- Allen key (1.5 and 2.5 mm).
- Spanner key for M5 screw.

### Procedure steps overview

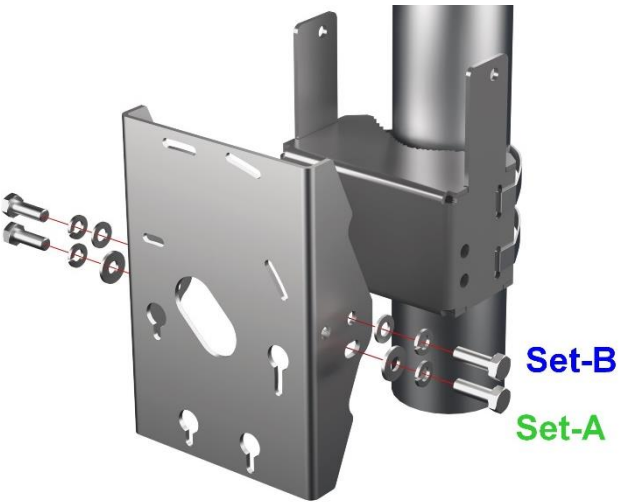


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## WiBAS OSDR-HUB and Omnidirectional 360 Antenna with OSDR-360-ANT-MNT-KIT Mounting Kit, Continued

### Procedure

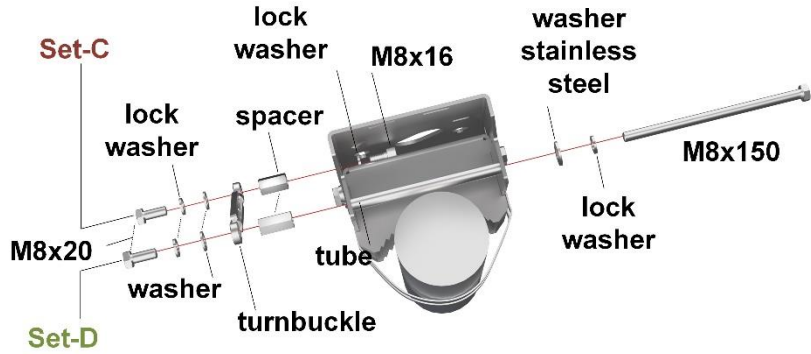
How to install the [HANT2628360V](#) antenna with adaptation plate ([OSDR26-360-ANT-ADAPT-KIT](#) or [OSDR28-360-ANT-ADAPT-KIT](#)) to WiBAS™ OSDR-HUB 26 / 28 GHz and then to mounting kit ([OSDR-360-ANT-MNT-KIT](#)), proceed as follows:

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Perform the following actions:</p> <ul style="list-style-type: none"> <li>Pass the steel hose clamps through the pillar bracket respective openings, as shown below:</li> </ul>  <ul style="list-style-type: none"> <li>Use the tool with M5 hexagon female bit to fully tighten the hose clamps worm screws.</li> </ul> <p> <b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>7 Nm</b>.</p>            |
| 2    | <p>Perform the following actions:</p> <ul style="list-style-type: none"> <li>Place mounting bracket onto the pillar bracket <b>(A)</b> and then install the set of pole mounting kit packing list materials, as shown below:</li> </ul>  <ul style="list-style-type: none"> <li>Use the tool with M8 hexagon female bit to slightly tighten the screws.</li> </ul> <p> <b>The maximum tightening torque is applied to the last step.</b></p> |

*Continued on next page*

## WiBAS OSDR-HUB and Omnidirectional 360 Antenna with OSDR-360-ANT-MNT-KIT Mounting Kit, Continued

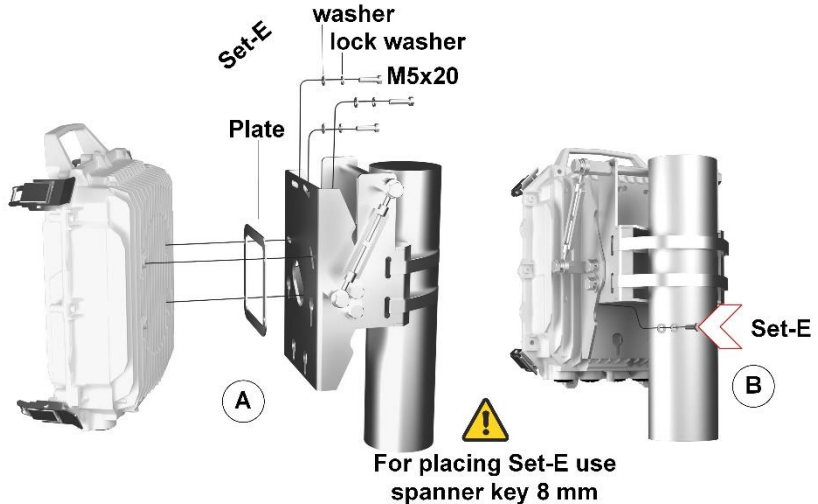
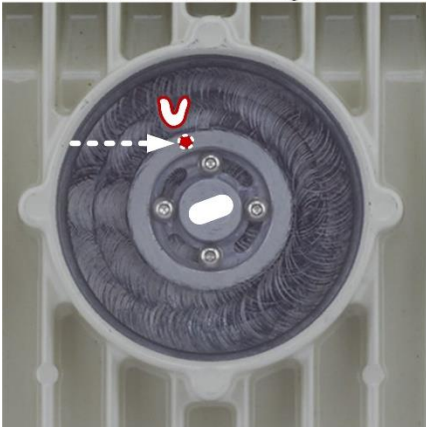
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>Install the set of pole mounting kit packing list materials, as shown below:</p>  <ul style="list-style-type: none"> <li>• Use the tool with M8 hexagon female bit to fully tighten the screws.</li> </ul> <p> <b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>19.3 Nm</b>.</p> |
| 4    | <p>Use the allen key (2.5 mm) to remove the radio unit screws, as shown below:</p>                                                                                                                                                                                                                                                                                                                        |

*Continued on next page*

## WiBAS OSDR-HUB and Omnidirectional 360 Antenna with OSDR-360-ANT-MNT-KIT Mounting Kit, Continued

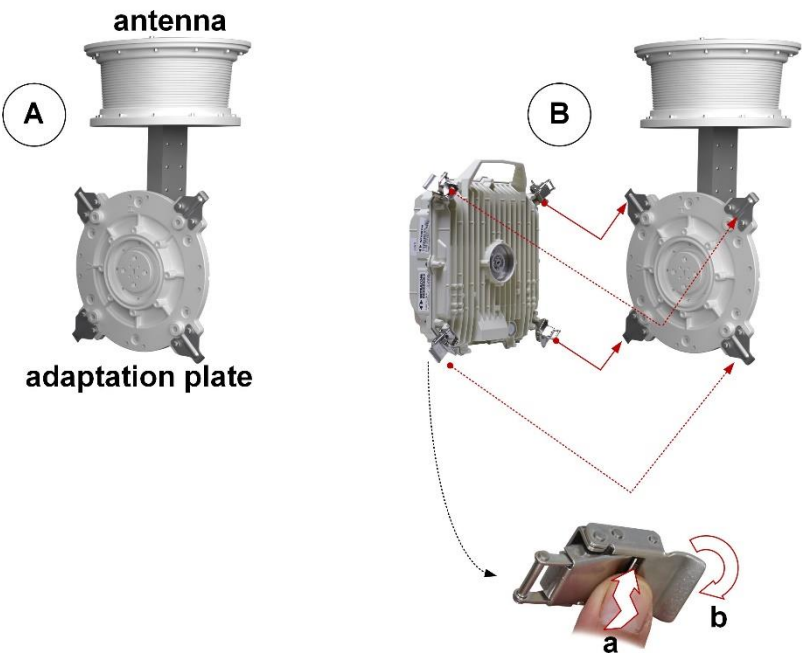
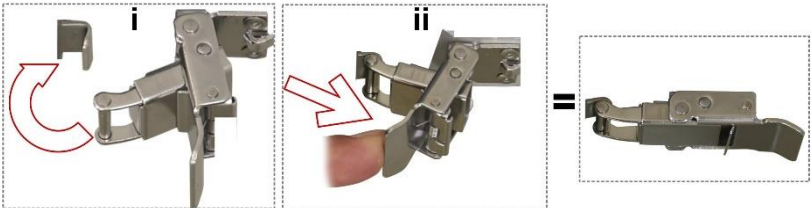
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>Install the set-E of pole mounting kit packing list materials, as shown below:</p>  <p>For placing Set-E use spanner key 8 mm</p>                                                                                                                                                                                                                                                                                |
| 6    | <p>For <b>vertical polarization</b> place antenna (<a href="#">HANT2628360V</a>) and radio unit, as shown below:</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Radio unit wave guide</p>  </div> <div style="text-align: center;"> <p>Antenna feeder</p>  </div> </div> |

*Continued on next page*

## WiBAS OSDR-HUB and Omnidirectional 360 Antenna with OSDR-360-ANT-MNT-KIT Mounting Kit, Continued

Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | <p>Perform the following actions:</p> <ul style="list-style-type: none"> <li>• Install the adaptation plate onto the antenna <b>(A)</b>, as described to INSTALLATION INSTRUCTION leaflet (included in adaptation kit package).</li> <li>• Install antenna to radio unit <b>(B)</b>, as shown below:</li> </ul> <div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>• Lock and secure the radio latches, as shown below:</li> </ul> <div style="text-align: center;">  </div> |
| 8    | <p>Use the tool with M8 hexagon female bit to fully tighten the set-A and set-B screws of the pole mounting kit.</p> <p> <b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>19.3 Nm</b>.</p>                                                                                                                                                                                                                                                                                                                                                                |

End of procedure.

## WiBAS G5 micro-BS / evo-BS and Omnidirectional 360 Antenna with MTK-DMA-BX Mounting Kit

### Introduction

This paragraph describes the installation procedures that needs to be followed when combining the Base Station radios and sectoral antennas that are listed below:

|                          |              | Radio Units Frequency (GHz) – Form Factor |                       |
|--------------------------|--------------|-------------------------------------------|-----------------------|
|                          |              | WiBAS™ G5                                 |                       |
|                          |              | micro-BS<br>28                            | evo-BS<br>24.25-29.50 |
| Antenna<br>Order<br>Code | HANT2628360V | √(2)                                      | √(2)                  |



WiBAS™ G5 evo-BS requires external GNSS module kit installation. Please refer to [Installing External GNSS Module](#).

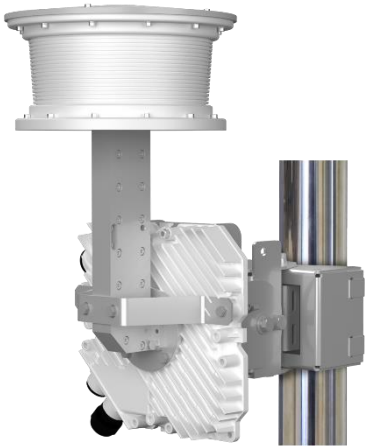
*Continued on next page*

<sup>(2)</sup> Mounting kit with order code **MTK-DMA-BX**.

# WiBAS G5 micro-BS / evo-BS and Omnidirectional 360 Antenna with MTK-DMA-BX Mounting Kit, Continued

**Overview**      The following materials table for installation contains indicative order codes:

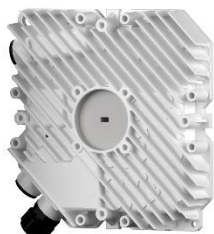
| WMBS-28-L-1008-01 or WG5-EVO-BS-24-26                                              |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |                                                                                     |
| MTK-DMA-BX                                                                         | HANT2628360V                                                                        |
|  |  |



Continued on next page

## WiBAS G5 micro-BS / evo-BS and Omnidirectional 360 Antenna with MTK-DMA-BX Mounting Kit, Continued

### Radio unit packing materials

| <b>WMBS-28-L-1008-01 or<br/>WG5-EVO-BS-26-28</b>                                  | <b>Packing Materials</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Radio unit.</li> <li>• Materials for installing radio unit to <b>MTK-DMA-BX</b> mounting kit: <ul style="list-style-type: none"> <li>– M5 x 50 mm screws (x4)</li> <li>– M5 washers (x4)</li> <li>– M5 nuts (x4)</li> <li>– Spacers 12 mm (x4) - aluminum</li> </ul> </li> <li>  <ul style="list-style-type: none"> <li>• DO NOT USE the following materials (used for installing radio unit to <b>HANT28180H</b> antenna): <ul style="list-style-type: none"> <li>– Set of latches (x4)</li> <li>– M6 x 12 mm screws (x8)</li> <li>– M6 lock washers (x8)</li> </ul> </li> </ul> </li> </ul> |

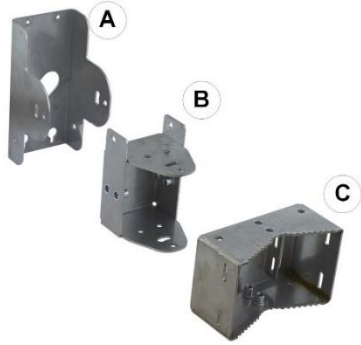
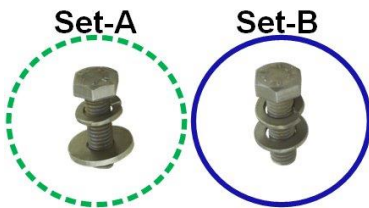
### Antenna packing materials

| <b>HANT2628360V</b>                                                                 | <b>Packing Materials</b>                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Antenna.</li> <li>• Safety collar and materials for installing antenna to <b>WMBS-OB-U-DSDS-SB</b> or <b>WG5-EVO-BS-LB-UB</b> radio unit.</li> <li>• Installation leaflet.</li> <li>• Greasing paste.</li> </ul> |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Omnidirectional 360 Antenna with MTK-DMA-BX Mounting Kit, Continued

### Pole mounting kit packing materials

| MTK-DMA-BX                                                                         | Packing Materials                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <ul style="list-style-type: none"> <li>• Elevation bracket (A).</li> <li>• Azimuth bracket (B).</li> <li>• Pole bracket (C).</li> </ul>                                                                                                                                                                                                     |
|   | <ul style="list-style-type: none"> <li>• Pole hose clamps (x2): <ul style="list-style-type: none"> <li>– Clamp diameter: 64 mm to 140 mm</li> <li>– Pole diameter: 48 mm to 100 mm.</li> </ul> </li> </ul>                                                                                                                                  |
|  | <p><b>Set-A:</b></p> <ul style="list-style-type: none"> <li>• M8 x 25 mm screws (x4).</li> <li>• M8 lock washers (x4).</li> <li>• M8 washers stainless steel (x4).</li> </ul> <p><b>Set-B:</b></p> <ul style="list-style-type: none"> <li>• M8 x 25 mm screws (x4).</li> <li>• M8 lock washers (x4).</li> <li>• M8 washers (x4).</li> </ul> |



The following set of materials are not used for this product:



- M5 x 40 mm screws (x4).
- M5 washers (x4).
- M5 flange nut serrated (x4).

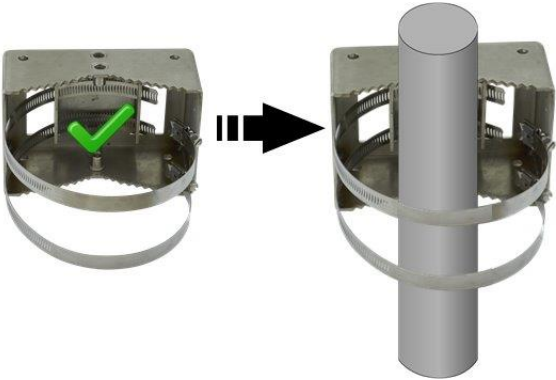
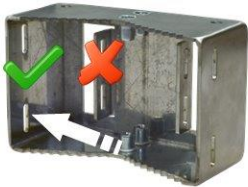
### Installation tools

Adjustable torque wrench with hexagon female bit.

*Continued on next page*

# WiBAS G5 micro-BS / evo-BS and Omnidirectional 360 Antenna with MTK-DMA-BX Mounting Kit, Continued

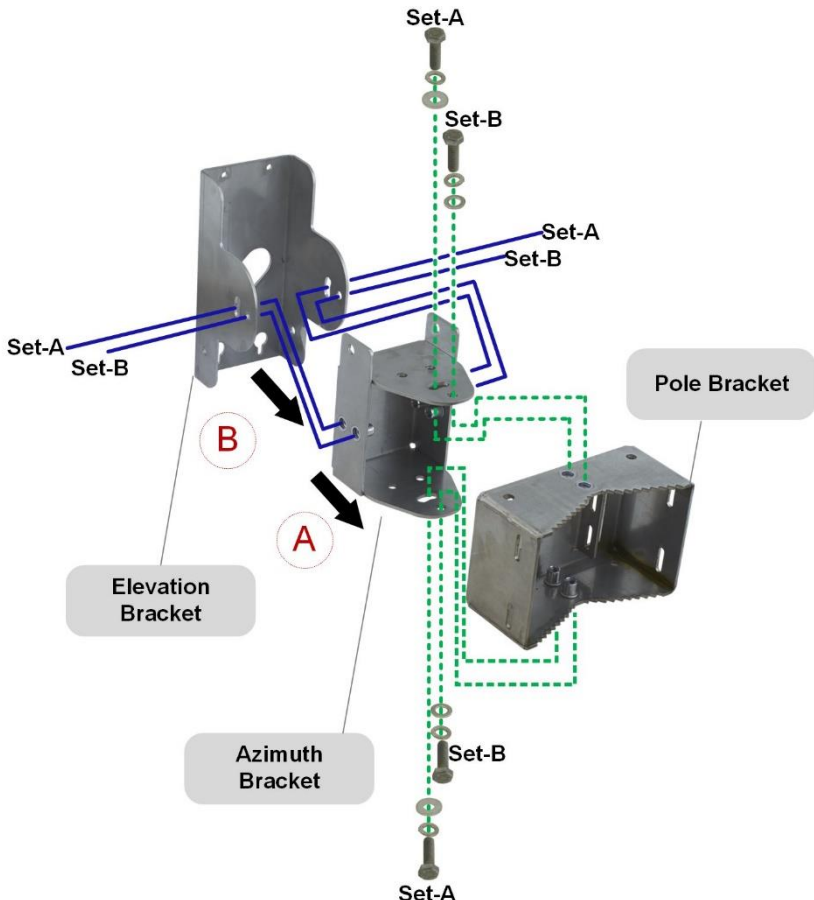
**Procedure**      How to install the WiBAS™ G5 micro-BS / evo-BS to [HANT2628360V](#) antenna, proceed as follows:

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Perform the following actions:</p> <ul style="list-style-type: none"><li>• Pass the steel hose clamps through the pole bracket respective openings, as shown below:</li></ul> <p><b>For pole diameter 48 mm up to 159 mm</b></p>  <p><b>For pole diameter 160 mm up to 300 mm</b></p>  <ul style="list-style-type: none"><li>• Use the tool with M5 hexagon female bit to fully tighten the hose clamps worm screws.</li></ul> <p> <b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>7 Nm</b>.</p> |

*Continued on next page*

## WiBAS G5 micro-BS / evo-BS and Omnidirectional 360 Antenna with MTK-DMA-BX Mounting Kit, Continued

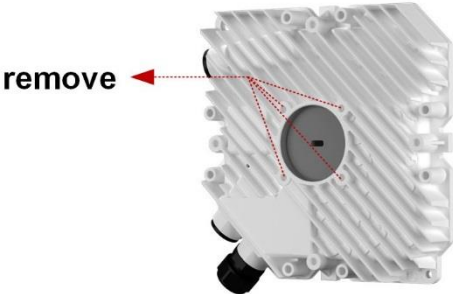
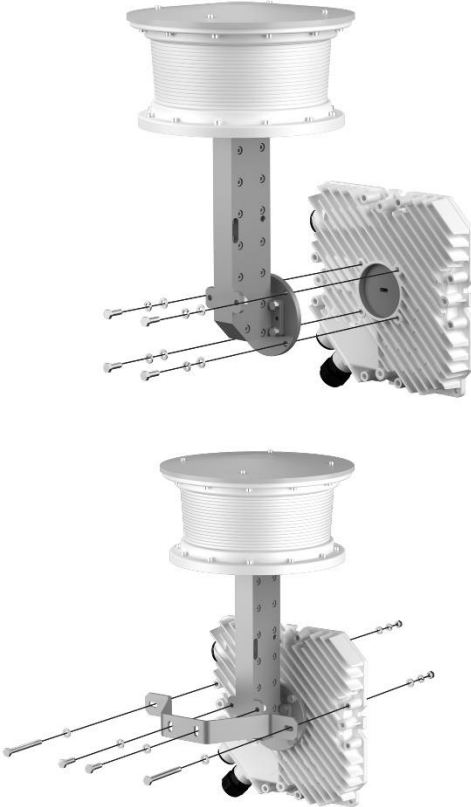
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p>Perform the following actions:</p> <ul style="list-style-type: none"> <li>• Mount azimuth bracket onto the pole bracket (<b>A</b>) and then install Set-A (x 2) and Set-B (x 2), as shown below.</li> <li>• Mount elevation bracket onto the azimuth bracket (<b>B</b>) and then install Set-A (x2) and Set-B (x2), as shown below.</li> </ul>  <ul style="list-style-type: none"> <li>• Use the tool with M8 hexagon female bit to slightly tighten the screws.</li> </ul> <p> The maximum tightening torque is applied to the last step.</p> |

Continued on next page

# WiBAS G5 micro-BS / evo-BS and Omnidirectional 360 Antenna with MTK-DMA-BX Mounting Kit, Continued

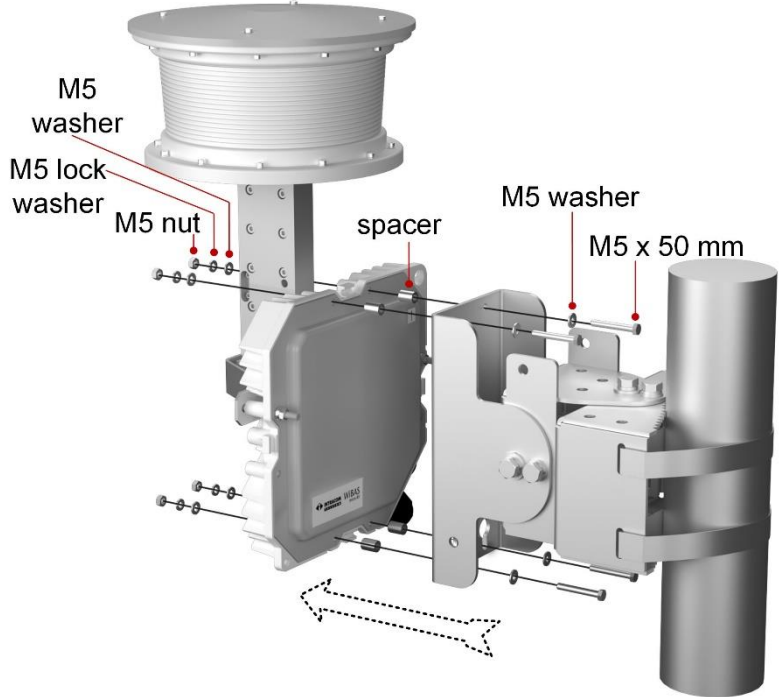
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>Use the allen key (2.5 mm) to remove the following M5 x 6 mm screws (x4) form radio unit:</p> <div></div>                                                                  |
| 4    | <p>Install the antenna to radio unit as described in the installation leaflet of antenna package.</p> <p>The following pictures is an installation preview:</p> <div></div> |

Continued on next page

## WiBAS G5 micro-BS / evo-BS and Omnidirectional 360 Antenna with MTK-DMA-BX Mounting Kit, Continued

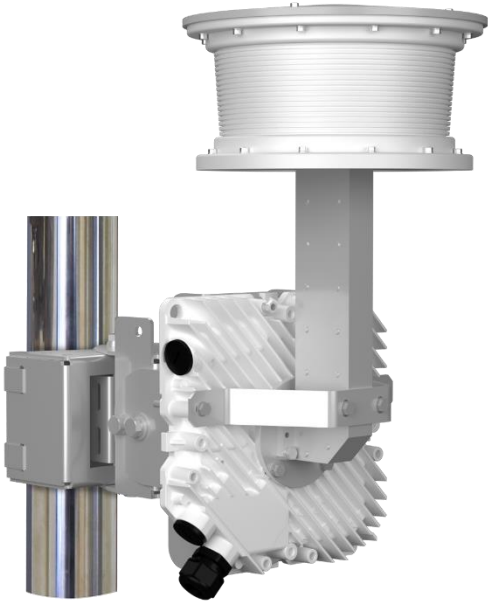
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>Perform the following actions:</p> <ul style="list-style-type: none"> <li>Install the radio unit onto the elevation bracket. as shown below:</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>From order code <b>WMBS-28-L-1008-SB</b> or <b>WG5-EVO-BS-LB-UB</b> use the following materials: <ul style="list-style-type: none"> <li>M5 x 50 mm screws (x4)</li> <li>M5 washers (x4)</li> <li>M5 nuts (x4)</li> <li>Spacers 12 mm (x4) - aluminum</li> </ul> </li> </ul>  <ul style="list-style-type: none"> <li>Use the tool with M5 hexagon female bit to fully tighten the screws.</li> </ul> <p><b>⚠ Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>4.2 Nm</b>.</p> |

Continued on next page

# WiBAS G5 micro-BS / evo-BS and Omnidirectional 360 Antenna with MTK-DMA-BX Mounting Kit, Continued

Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6    | <p>Verify that the installation appears, as follows (the following picture shows vertical polarization installation example):</p>                                                      |
| 7    | <p>Use the tool with M8 hexagon female bit to fully tighten the screws.</p> <p> <b>Do not over tighten.</b> Adjust the tool for applying maximum tightening torque <b>17.8 Nm</b>.</p> |

End of procedure.

## WiBAS G5 evo-BS and Parabolic Integrated Antenna, 0.6 m

This paragraph describes the installation procedures that needs to be followed when combining the Base Station radios and parabolic antenna that are listed below:

|                          |                  | Radio Units Frequency (GHz) –<br>Form Factor |
|--------------------------|------------------|----------------------------------------------|
|                          |                  | WiBAS™ G5 evo-BS                             |
|                          |                  | 24.25-29.50                                  |
| Antenna<br>Order<br>Code | ANT-IS-2628-2F-C | √ <sup>(1)</sup>                             |



Parabolic antenna is used with WiBAS™ G5 evo-BS only for Point-to-Point operation.



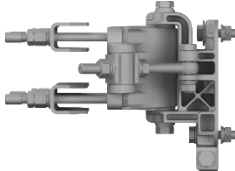
WiBAS™ G5 evo-BS requires external GNSS module kit installation. Please refer to [Installing External GNSS Module](#).

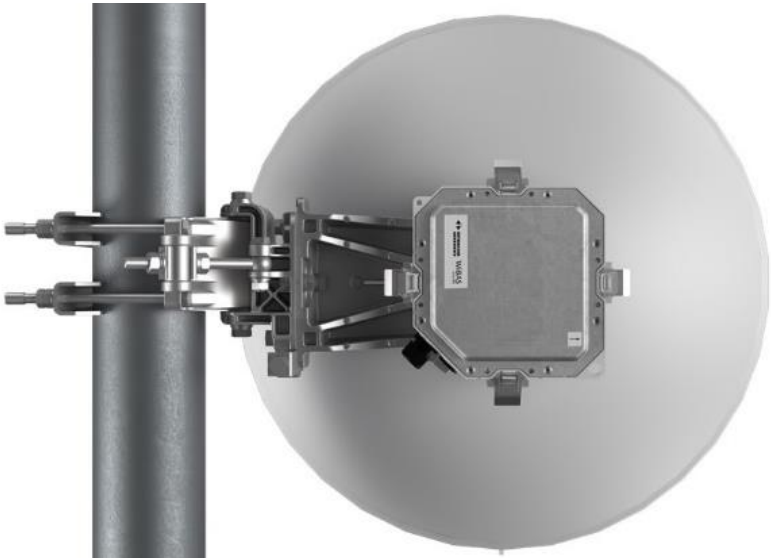
*Continued on next page*

<sup>(1)</sup> Mounting kit from antenna package.

# WiBAS G5 evo-BS and Parabolic Integrated Antenna, 0.6 m, Continued

The following materials table for installation contains indicative order codes:

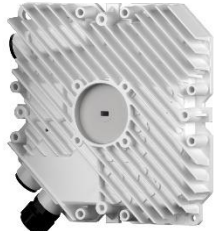
| WG5-EVO-BS-27-29                                                                   |                                                                                      |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |                                                                                      |
| ANT-IS-2628-2F-C                                                                   |                                                                                      |
|  |  |



Continued on next page

## WiBAS G5 evo-BS and Parabolic Integrated Antenna, 0.6 m, Continued

### Radio unit packing materials

| WG5-EVO-BS-27-29                                                                  | Packing Materials                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Radio unit.</li> <li>• Materials for installing radio unit to <b>ANT-IS-2628-2F-C</b> antenna: <ul style="list-style-type: none"> <li>– Set of latches (x4)</li> <li>– M6 x 12 mm screws (x8)</li> <li>– M6 lock washers (x8)</li> </ul> </li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• The following materials are not used. Used for installing radio unit to <b>MTK-DMA-BX</b> mounting kit: <ul style="list-style-type: none"> <li>– M5 x 50 mm screws (x4)</li> <li>– M5 washers (x4)</li> <li>– M5 nuts (x4)</li> <li>– Spacers 12 mm (x4) - aluminum</li> </ul> </li> </ul> |

### Antenna packing materials

| ANT-IS-28-1F                                                                        | Details                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• Parabolic antenna, 0.6 m.</li> <li>• 4 x latches.</li> <li>• Pole mounting kit.</li> <li>• Greasing paste.</li> <li>• Installation Instructions.</li> </ul> |

### Installation tools

Adjustable torque U-wrench and cross-headed screw driver.

*Continued on next page*

# WiBAS G5 evo-BS and Parabolic Integrated Antenna, 0.6 m, Continued

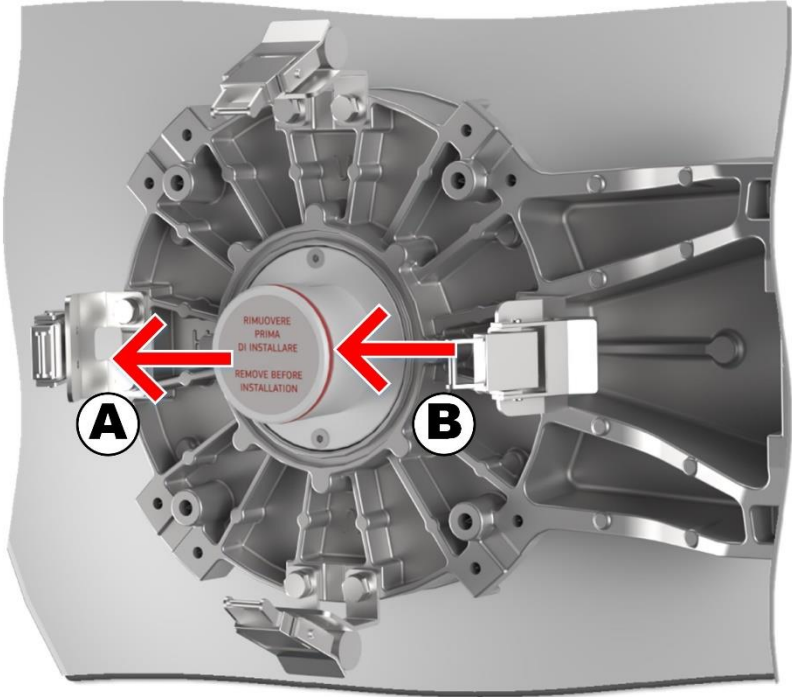
**Procedure** How to install the WiBAS™ G5 evo-BS to [ANT-IS-2628-2F-C](#) antenna, proceed as follows:

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Follow the included instructions to assemble the antenna mount and attach it to the antenna.</p> <p>The antenna installation should be as shown below.</p> <div data-bbox="616 696 1353 1256"></div> <div data-bbox="579 1305 668 1355"></div> <p>The antenna is capable to be installed in both side of the pole The above photo is indicative of the installation in the right offset orientation of the <a href="#">ANT-IS-2628-2F-C</a> model.</p> |

Continued on next page

## WiBAS G5 evo-BS and Parabolic Integrated Antenna, 0.6 m, Continued

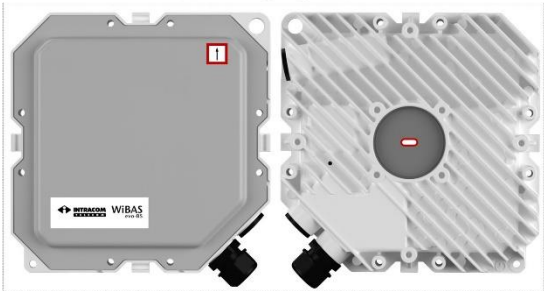
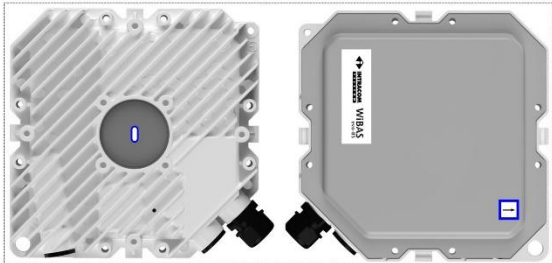
**Procedure,**  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p>Perform the following antenna actions:</p> <ul style="list-style-type: none"><li>• Remove the plastic sticker <b>(A)</b></li><li>• Lubricate the O-ring with silicone grease <b>(B)</b>.</li></ul>  <p>The diagram shows a top-down view of the antenna's internal structure. A central circular component has a red circle around it with the text 'RIMUOVERE PRIMA DI INSTALLARE' and 'REMOVE BEFORE INSTALLATION'. Two red arrows point to specific locations: arrow (A) points to a plastic sticker on the left side, and arrow (B) points to an O-ring on the right side.</p> |

*Continued on next page*

# WiBAS G5 evo-BS and Parabolic Integrated Antenna, 0.6 m, Continued

Procedure,  
continued

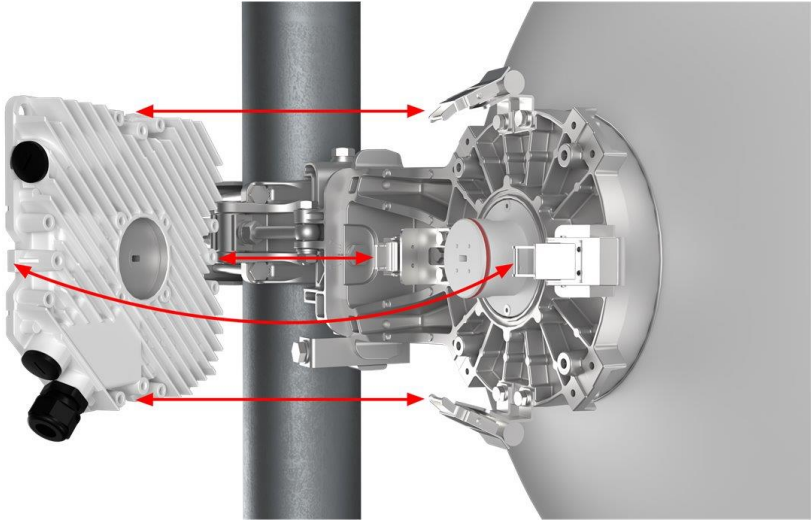
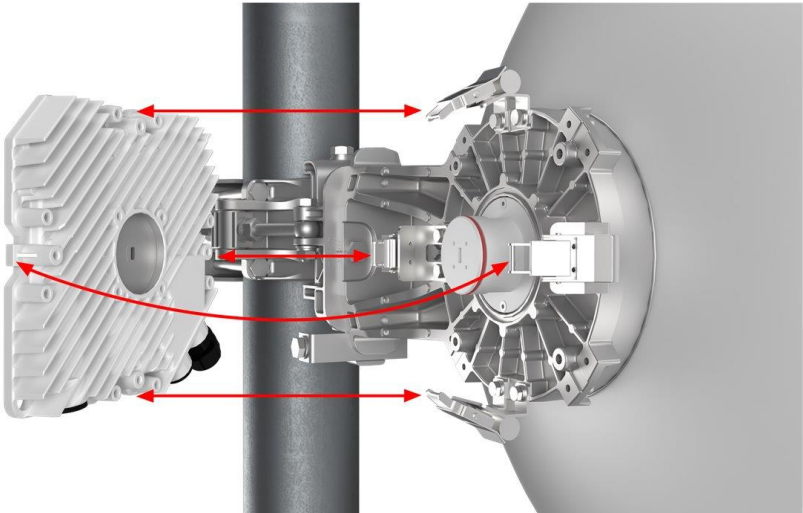
| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3a   | <p>Radio unit and antenna should be adjusted for common polarization, as shown below. If the <b>LINK</b> polarization is <b>VERTICAL</b> then the feeders should be remained, as shown below (radio unit – both sides view):</p> <div><div><b>RADIO UNIT</b></div><div><b>ANTENNA</b></div></div> <p>If the <b>LINK</b> polarization is <b>HORIZONTAL</b>, rotate the radio unit and antenna feeder<sup>(1)</sup>, as shown below (radio unit – both sides view):</p> <div><div><b>RADIO UNIT</b></div><div><b>ANTENNA</b></div></div> <div><div>Note</div>How to change antenna polarization refer to antenna installation leaflet.</div> |

Continued on next page

<sup>(1)</sup> How to rotate antenna feeder for changing polarization refer to antenna installation leaflet.

## WiBAS G5 evo-BS and Parabolic Integrated Antenna, 0.6 m, Continued

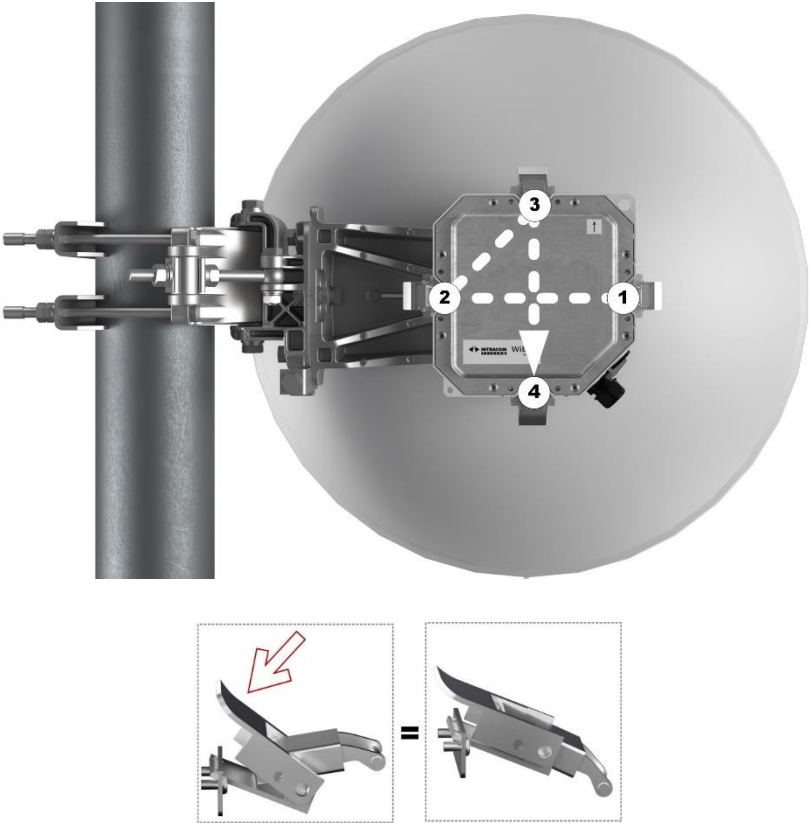
Procedure,  
continued

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3b   | <p>Perform radio unit installation into the antenna, as follows:</p> <ul style="list-style-type: none"> <li>• Unlock the four latches of the antenna:</li> <li>• For <b>vertical polarization</b> mount the radio unit to antenna, as shown below:</li> </ul>  <ul style="list-style-type: none"> <li>• For <b>horizontal polarization</b> mount the radio unit to antenna position, as shown below:</li> </ul>  |

*Continued on next page*

# WiBAS G5 evo-BS and Parabolic Integrated Antenna, 0.6 m, Continued

Procedure,  
continued

| Step | Action                                                                                                                                                                     |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <div>Lock and secure all four latches according to the pattern below:</div> <div></div> |

End of procedure.