


3.3.4 Installation of the RBS antenna on the pole mounting


Considerations

- The antenna must be installed **before** the RBS unit.
- The form of the sectored antennas may vary. Always refer to the "TOP" marking on the antenna when installing on the pole mounting.

	<p>WHATEVER THE TYPE OF ANTENNA, WHETHER FOR VERTICAL OR HORIZONTAL POLARIZATION, ALWAYS POSITION THE ANTENNA WITH THE "TOP" MARKING UPPERMOST. THE ORIENTATION OF THE ACCESS GUIDE DOES NOT DEFINE THE POLARIZATION.</p>
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Storage *(Figure 27 – Installing the RBS unit antenna)*

1. Position the RBS antenna against the pole mounting support (ref. **2**), and install it at the opposite side of the RBS unit.
2. Secure the RBS antenna using seven M6 x 25 screws (ref. **3**) and onduflex washers.

	<p>TAKE CARE NOT TO DAMAGE THE O-RING SEAL ON THE NOSE OF THE ANTENNA CONNECTION: SEE Figure 26 – Antenna nose. IF THE RBSs ARE NOT TO BE MOUNTED IMMEDIATELY AFTER THE MOUNTING OF THE ANTENNA, PROTECT THE CONNECTION NOSE (FROM WATER, DIRT AND IMPACT).</p>
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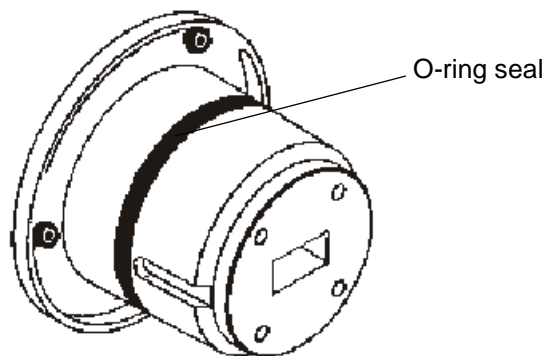


Figure 26 – Antenna nose

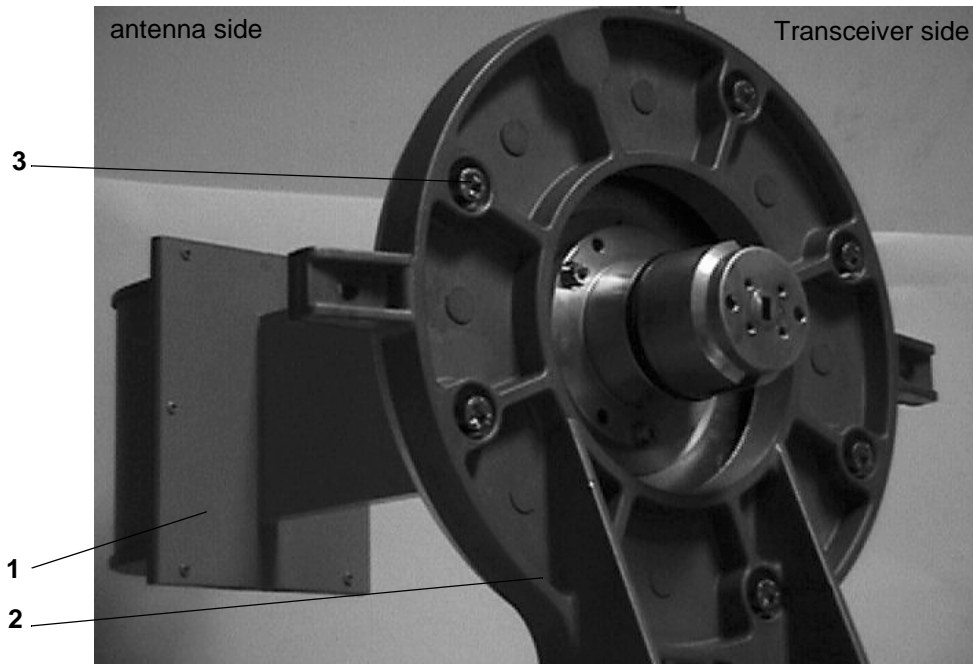


Figure 27 – Installing the RBS unit antenna

3.3.5 Installation of the RBS Unit

	IMPORTANT: THE RADIO UNIT ASSEMBLY MUST ALWAYS BE MANIPULATED BY ITS HANDLE ONLY.
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Stages

1. Remove the two transparent plastic protective caps : that of the antenna and that of the RBS unit.

	IMPORTANT: REMOVE THE CAP WITH CARE, TAKING CARE NOT TO DAMAGE THE SEAL WINDOW AT THE BOTTOM OF THE GUIDE.
	IMPORTANT: THE O-RING SEAL (SEE Figure 26 – Antenna nose) SHOULD BE COATED BEFORE SETTING (SILICON GREASE PROVIDED WITH THE ANTENNA).

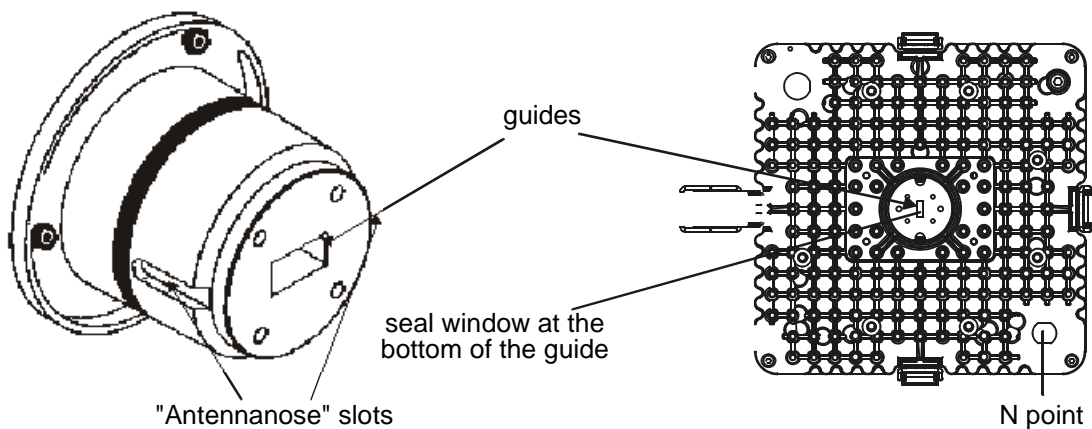


Figure 28 – RBS and antenna nose

2. Take the transceiver by the handle and place the two bosses in the "nose" of the unit against the two

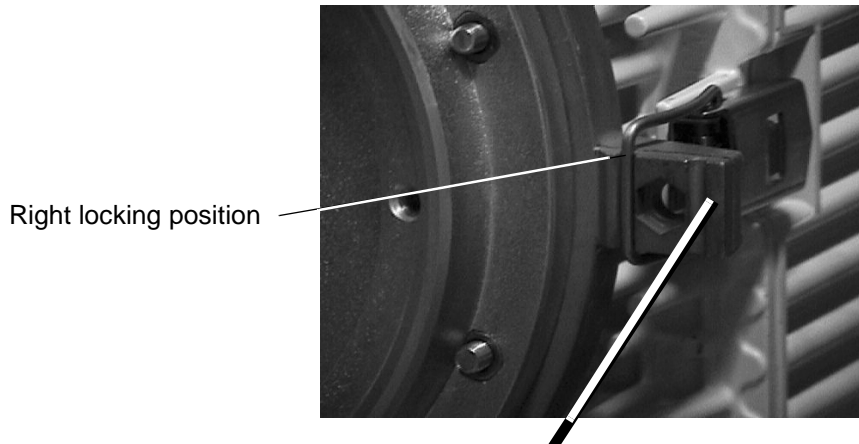
slots in the "nose" of the antenna.

Note: the RBS-DBS link cable (N point) should be towards the base of the transceiver.

Note: the sectored antenna must be placed with the TOP marking uppermost, the antenna "nose" slots coinciding with those of the RBS.

The waveguide needs to be positioned so that it is aligned with the antenna's rectangular orifice.

3. While holding the radio unit, begin by locking (See *Figure 29 – Locking the Radio unit*) the **two side snap-locks** on the support, then that at the **bottom**, followed by that at the **top**.



	NEVER USE THE EXTERNAL KAYWAYS TO LOCK THE RADIO UNIT.
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Figure 29 – Locking the Radio unit

REMINDER: The RBS/antenna assembly requires **no additional seal on the SHF flanges**; the two ends are smooth. Sealing is provided by the O-ring seal around the male "noses" (see *Figure 26 – Antenna nose*).

3.3.6 Antenna alignment

	REMINDER: THE RADIO UNIT/ANTENNA ASSEMBLY MUST ALWAYS BE MANIPULATED BY THE RADIO UNIT'S HANDLE ONLY.
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3.3.6.1 Deflection characteristics

The deflection obtained with the turnbuckles is : **elevation = ± 25°** and **bearing = ± 10°**.

3.3.6.2 Definitions about antenna alignment

Tilt or Elevation : angle of tilt from the **horizontal**.

Tilt UP : the antenna points **upwards**.

Tilt 0 : the antenna is **horizontal**.

Tilt DOWN : the antenna points **downwards**.

3.3.6.3 Coarse azimuthal alignment of the antenna

The azimuthal coarse alignment has to be carried out when installing the pole mounting.

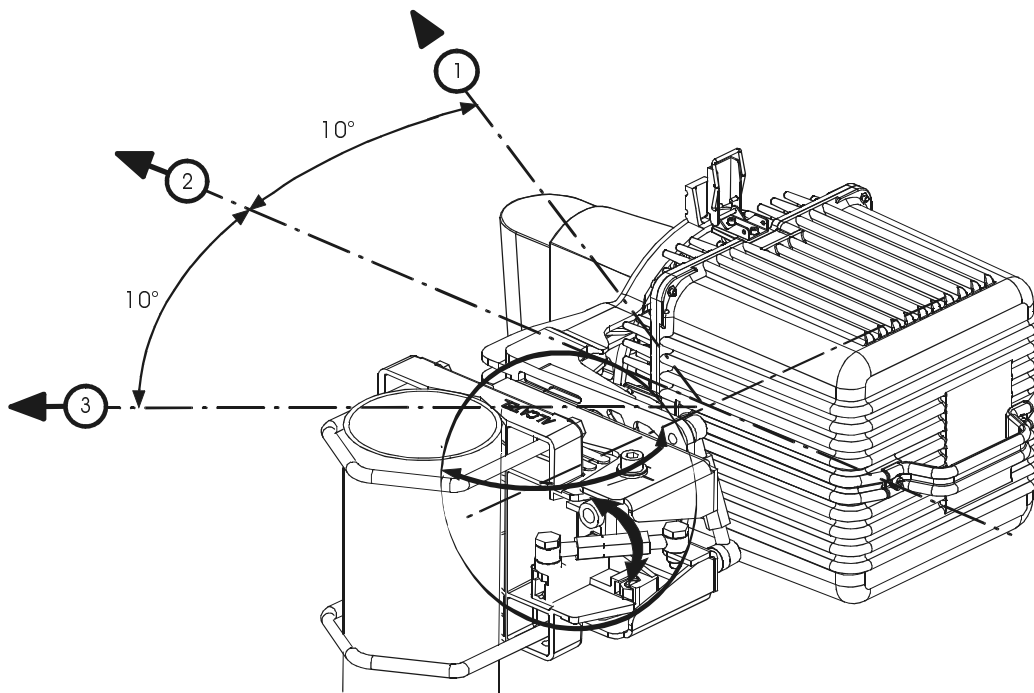



Figure 30 – Azimuthal alignment of antenna

	CAUTION: THE BRACKET NUTS MUST BE FASTENED TO TORQUE OF 3 mdaN, ± 10%. THE TUBE AND THE BRACKETS MUST BE CLEAN AND WITHOUT GREASE, EXCEPT ON THE THREADS.
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3.3.6.4 Coarse azimuthal alignment of the antenna

The elevation alignment is performed only with the elevation turnbuckles. If the elevation angle is higher than (+ 5°) or lower than (- 5°), it is necessary to:

- remove completely one of the 2 screws fixing the antenna support on the azimuth support and,
- insert it in the third hole accessible as shown in the *Figure 31 – Elevation coarse alignment of antenna*.

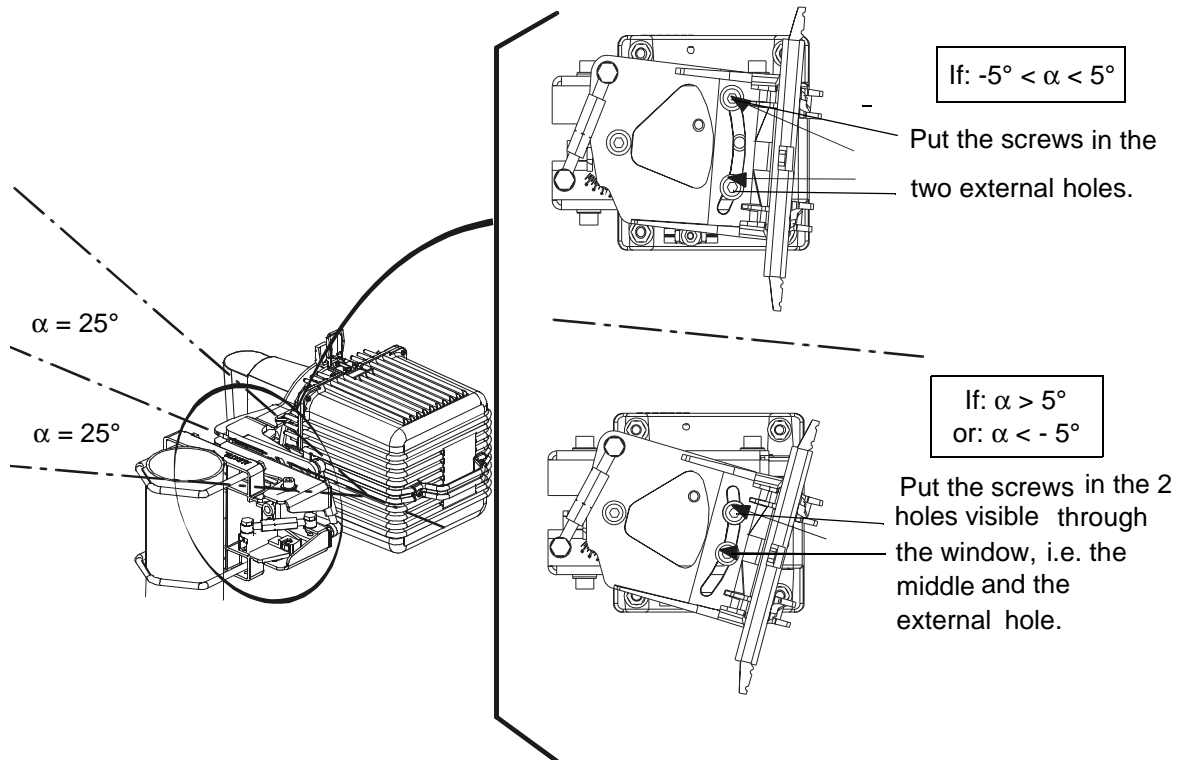




Figure 31 – Elevation coarse alignment of antenna

	CAUTION: IN ALL CASES, THE SUPPORT MUST BE FIXED WITH 3 SCREWS, 2 PUT IN THE WINDOW AND 1 CORRESPONDING TO ITS AXIS OF ROTATION. ALL SCREWS MUST BE TIGHTENED AND SECURED ONLY AFTER THE END OF THE ALIGNMENT OF ANTENNA.
	CAUTION: TAKE CARE TO PUT THE 2 SCREWS IN THE WINDOW WITH THE FLAT WASHERS POSITIONED AS SHOWN IN THE FIGURE BELOW.

