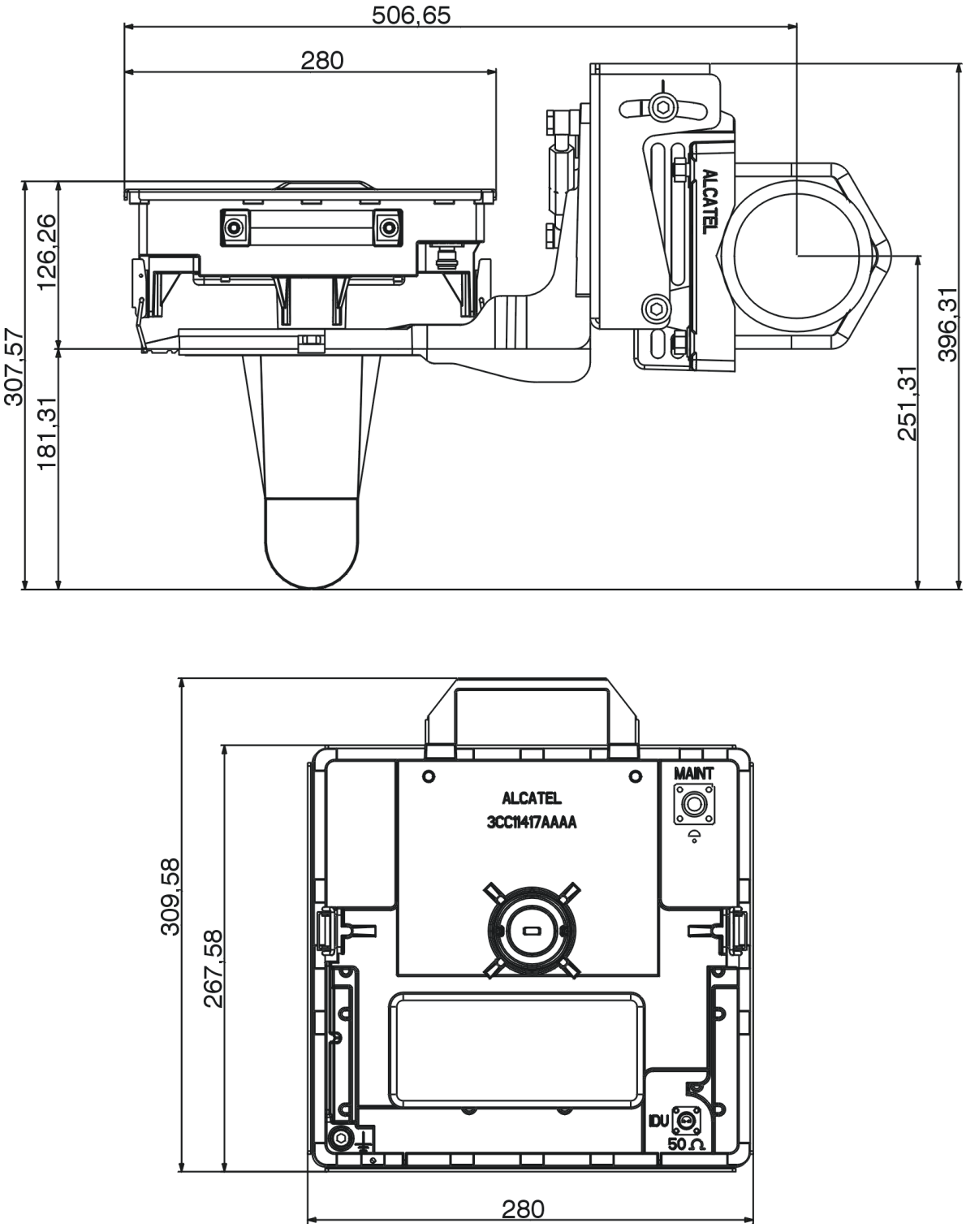

Figure 13 – Dimensions of the RBS flat unit

3.3.2 Installation and orientation of the mechanical system 9900UXI102

	**VERTICALITY OF THE BEARING: ± 0.5 ° FOR THE POLE OR TUBE.**

Considerations

- Installation can be carried out on an existing or newly installed tube or pole.
- The external diameter of the tube or pole is **114 mm** in standard configuration.
- The mechanical assembly is supplied complete, mechanically assembled, with screw fastenings kit and ground terminals.

Note: *other tube diameters may be used depending on the loads to be supported: minimum diameter 76 mm and maximum 114; for this, please consult us.*

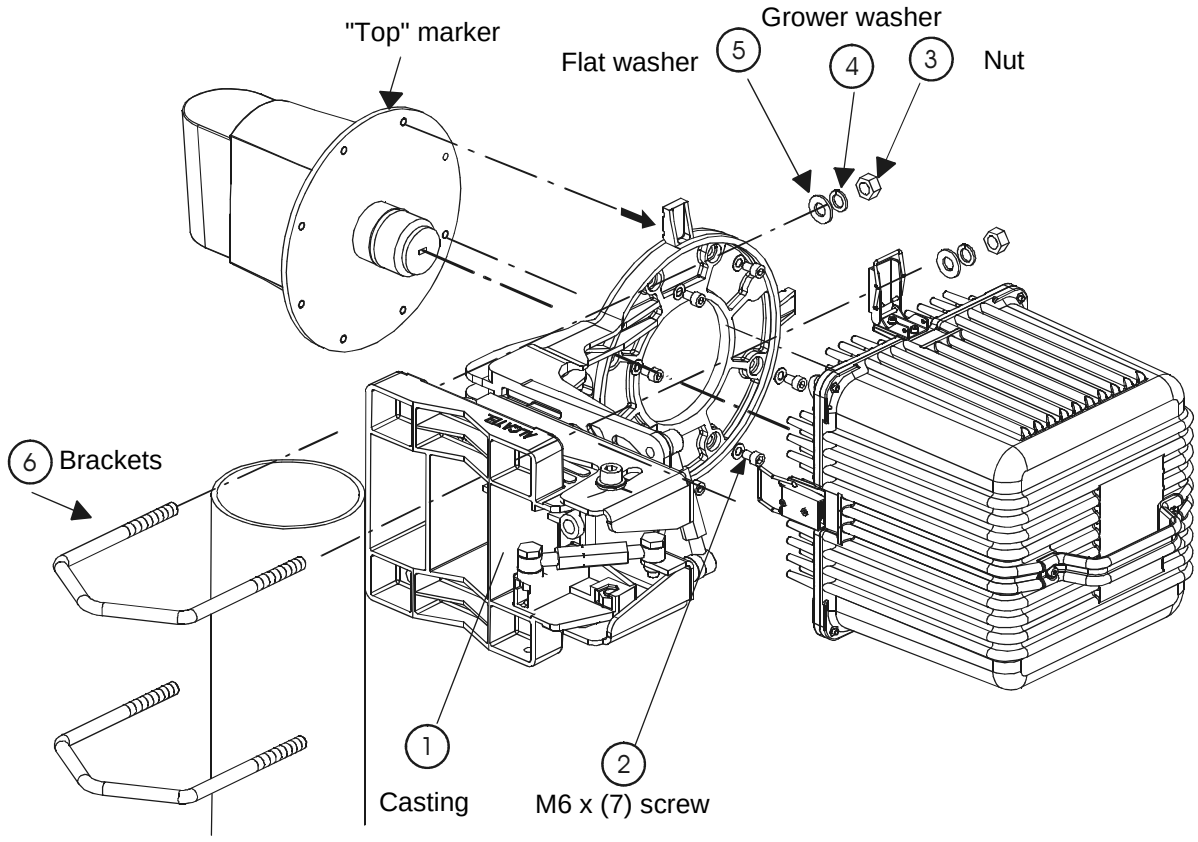

Figure 14 – Installation of the pole mounting 9900UXI102 with RBS cube

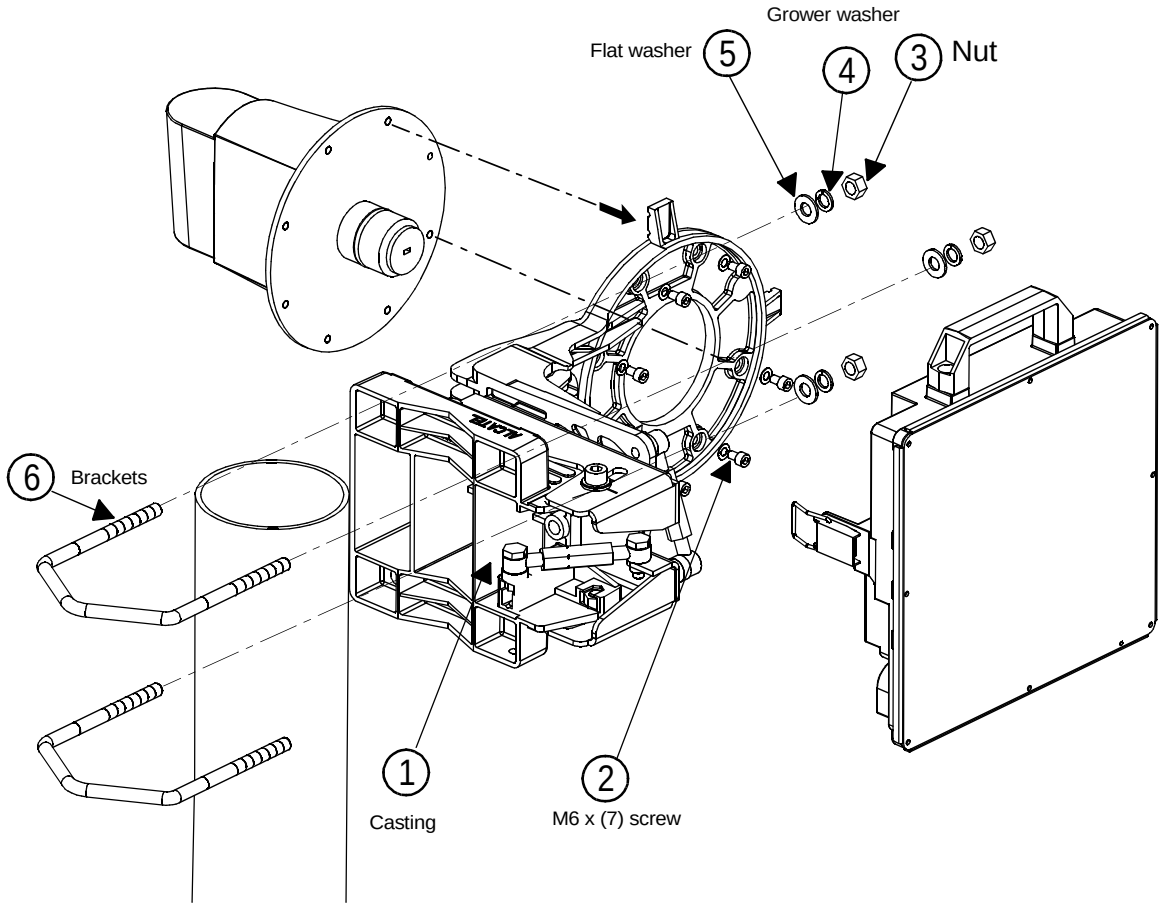

Figure 15 – Installation of the pole mounting 9900UXI102 with RBS flat

	**IMPORTANT: YOU MUST DEFINE THE POSITION OF THE EQUIPMENT RESPECT TO THE PIPE (RIGHT OR LEFT SIDE) BEFORE INSTALLING.**

Note: *the coarse horizontal alignement is done during the installation of the pole mounting.*

3.3.3 Installation rules for multi-RBS configurations

3.3.3.1 Main configuration (1+0)

For installation configurations containing several RBSs, imperatively apply the following rules to ensure efficient radio transmissions:

– Position the antenna to ensure **best clearance**; installation as near as possible to the corners of the building or pylon is therefore strongly recommended. To avoid interference with the building the antenna should not be too low: vertical clearance must be a view angle of at least ± 20° from the antenna axis.

	**THE 90° ANTENNA COVERAGE OF EACH ANTENNA MUST BE CLEAR OF OBSTACLES. FROM ANTENNA AXIS : HORIZONTAL CLEARANCE : ± 60°, VERTICAL CLEARANCE ± 20°**

– For an installation involving initially less than 4 RBSs, select the location of the first RBSs leaving space for other RBSs that may be added later in the event of extension to the installation.

– Several configurations are possible depending on the site and the number of radios; the installation should be the best compromise possible between: number of masts/radio performance. If the different configurations possible - in the case of four radios to be installed on a building - are considered, the configuration giving the best compromise corresponds to figure 16, where 2 masts have been installed with 2 RBSs per mast.

– However, it is allowable to install up to 4 RBS, equipped with the standard 90°/15 dBi antenna, on the same mast (90° angle between each sector, see *Figure 19 – Example of multi-RBS configuration: 4 RBS on the same mast (not advisable)*). This configuration can't be upgraded to the 1+1 configuration. We strongly recommend to use 2 different tubes to allow 1+1 extension.

– In the case of use of **several RBSs** equipped with standard antennas on the **same mast**, the installation restrictions are as follows:

  • the **lowest radio** must avoid the highest point of the building (obey the 20° minimum clearance angle specified above),

  • the radios must be stacked at the **same distance from each other**, the **minimum** distance between two consecutive antenna axes being **0.5 m** (see *Figure 16 – Clearances for adjacent sectors*).

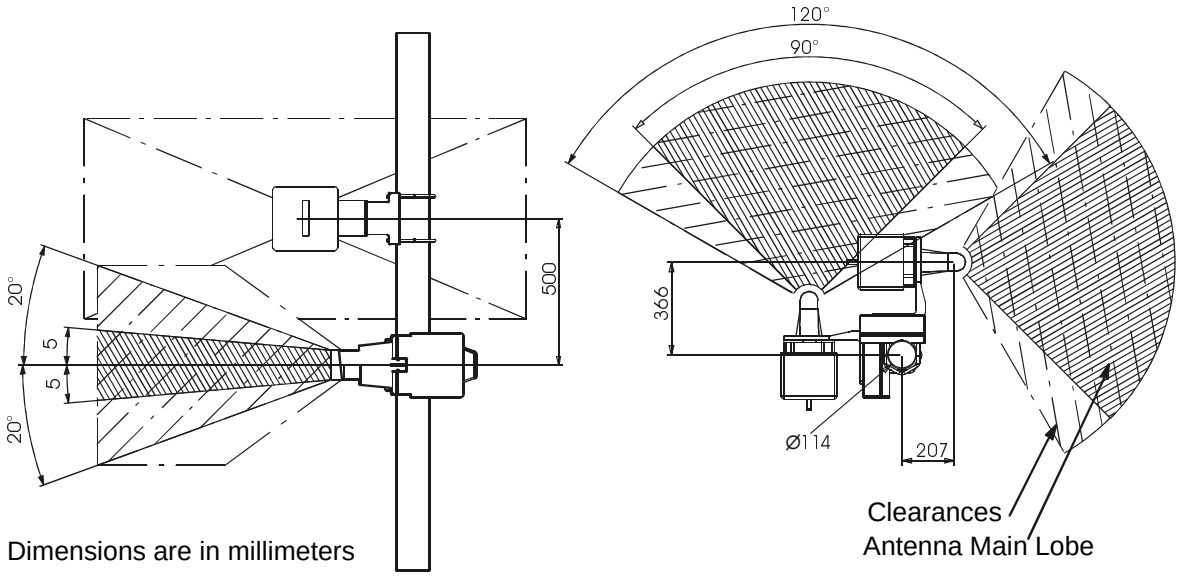

Figure 16 – Clearances for adjacent sectors

Multi-RBS configuration examples in the case of 4 RBS installation:

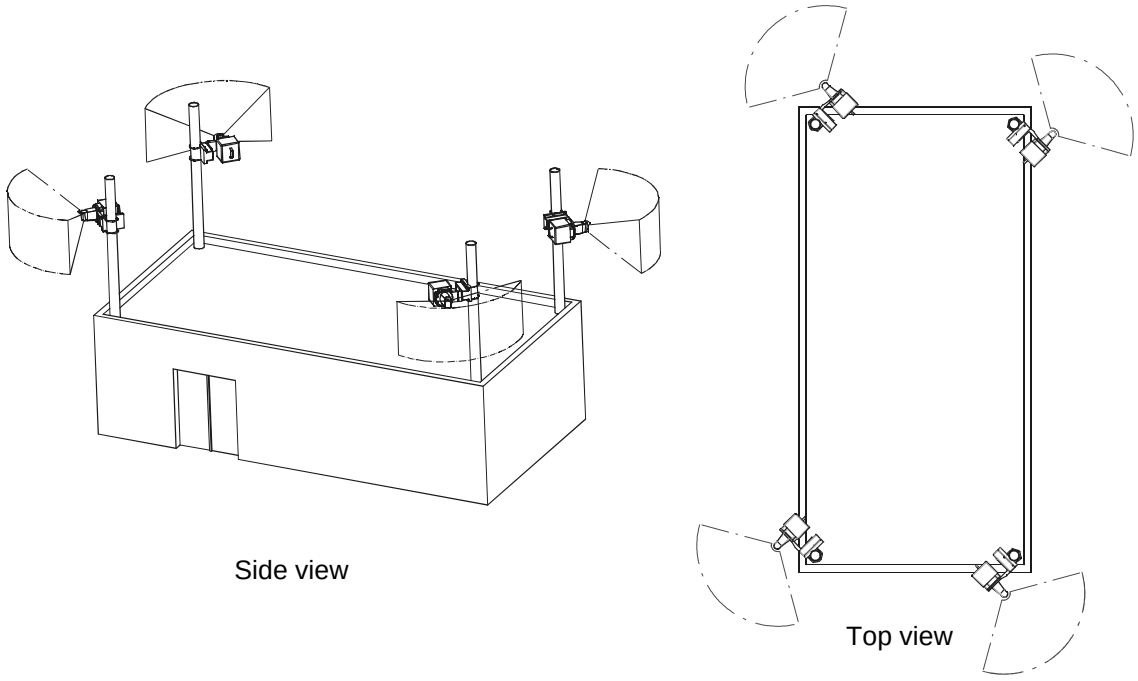

Figure 17 – Example of multi-RBS configuration: 4 masts with 1 RBS per mast

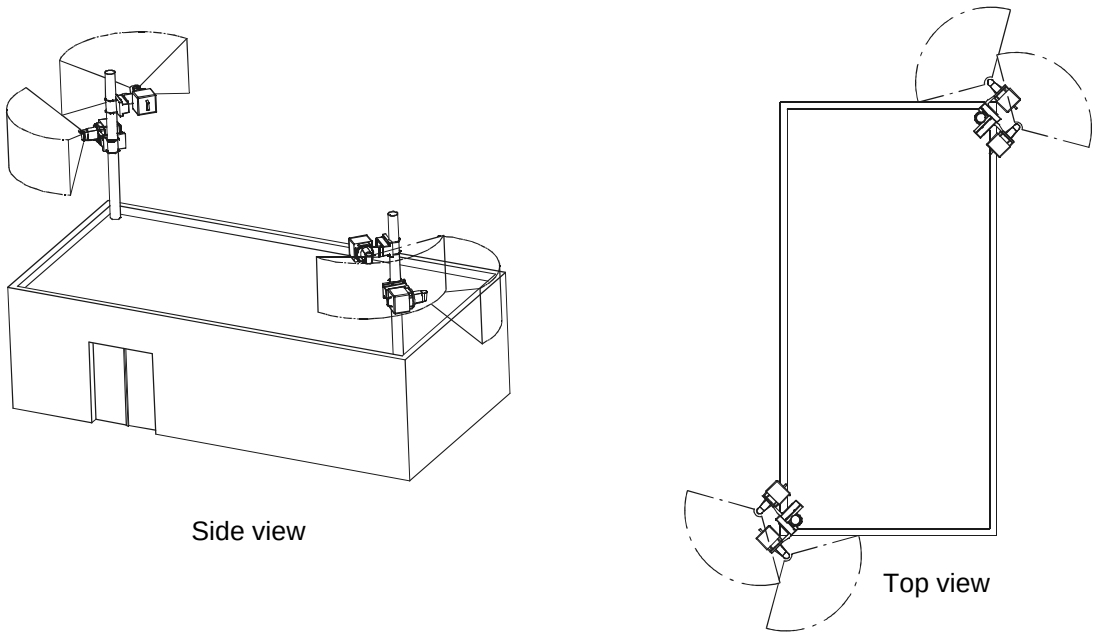

Figure 18 – Example of multi-RBS configuration: 2 masts with 2 RBS per mast (recommended)