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à

Liste de diffusion relecteurs

OBJET : RELECTURE NOTICES CLIENTS

Veuillez trouver ci-joint, pour relecture, le - Draft 01 de l'édition 01 :

TITRE DE LA NOTICE : Alcatel 7390
Multiservice broadband wireless access
solution
**Installation procedure for RBS high gain
sector antenna**
3CC12635AAAA TQ BJA 01 - Draft 01

Nous vous remercions de bien vouloir renseigner de vos remarques la fiche de relecture ci jointe. Vous pouvez y joindre une copie des pages à modifier avec vos remarques.

Meilleures salutations

Gérard SAINTE BEUVE

Liste de diffusion

Installation procedure for RBS high gain sector antenna

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Alcatel 7390

Multiservice broadband wireless access solution

Installation procedure for RBS high gain sector antenna



Status **In preparation**

Change Note

Short Title A7390 RBS high gain sector antennas

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1 – Foreword

1.1 – Presentation of the manual

This manual describes the installation of a RBS high gain sector antenna.

Users of this manual should always read it jointly with User Manual Alcatel 7390 Multiservice broadband wireless access solution - Base Station.

1.2 – Safety instructions

1.2.1 – General rules

The following general safety precautions must be observed by the installer and the operator. ALCATEL assumes no liability for the customer's failure to comply with these requirements.

- **Ground the equipment:** for Safety Class 1 equipment, always connect the earth conductor of the power cable to an appropriate earthing device.
- **DO NOT operate the product in an explosive atmosphere or in presence of flammable gases or fumes.**
- **For protection against fire:** replace the line fuse(s) only with fuse(s) of the same voltage and current rating and type.
- **Dangerous voltages:** users must not remove equipment covers or shields. The installation and maintenance procedures described in this manual are for use by service-trained personnel only.
- **Protection against short circuits:** the mains equipment should ensure protection against short circuits according to current domestic standards (residual current differential protection device recommended).
- Observe the standards in force for all activities carried out on the roofs.
- For any on-site intervention, observe the precautions against lightning.
- **DO NOT operate equipment which may be damaged: its level protection may be altered.**
- Whenever it is possible that the safety protection features built into this equipment have been impaired, ISOLATE FROM THE POWER SUPPLY and do not use the equipment until safe operation can be verified by service-trained personnel. If necessary, return the equipment to Alcatel After Sales for service and repair.
- **DO NOT open equipment.**
- Return the product to Alcatel Customer Service for servicing and repair.

1.3 – Precautions



- **protection of equipment,**
- warning of a procedure, practice or condition that **could be dangerous** to equipment or its environment,
- danger of damage to the equipment or its environment; permanent loss of data possible.

2 – Checking the delivered configuration

The following components are delivered, depending on the frequency:

2.1 – 25 GHz radio link

Qty	Item description	Commercial code	ALCATEL part number	Weight
1	25 GHz 90° 21dBi high gain sector antenna H polarized	9900 ABN 002	3CC12589AAAA	4,4 Kg max
(or)	25 GHz 90° 21dBi high gain sector antenna V polarized		3CC12589ADAA	
(or)	25 GHz 180° 18dBi high gain sector antenna H polarized	9900 ABN 003	ACL098270001	
(or)	25 GHz 180° 18dBi high gain sector antenna V polarized		ACL098260001	
1	Pole-mounting for RBS high gain antennas (M10 fixation screws included)	9900 UXI 106	3CC12013AAAA	6 Kg
1	25 GHz radio-mount (silicon grease, gasket, and screws included)		1AD034960001	0,9 Kg
1	25 GHz flextwist waveguide (l=600mm) (gaskets and fixation kit included)		3CC05749ADAA	0,2 Kg
1	25 GHz RBS and its installation hardware	9900 RBB 001	-	-

Tableau 1: 25 GHz radio link

2.2 – 28 GHz radio link

Qty	Item description	Commercial code	ALCATEL part number	Weight
1	28 GHz 90° 21dBi high gain sector antenna H polarized	9900 ABN 002	3CC12589ABAA	4,4 Kg max
(or)	28 GHz 90° 21dBi high gain sector antenna V polarized		3CC12589AEAA	
(or)	28 GHz 180° 18dBi high gain sector antenna H polarized	9900 ABN 003	ACL098290001	
(or)	28 GHz 180° 18dBi high gain sector antenna V polarized		ACL098280001	
1	Pole-mounting for RBS high gain antennas (M10 fixation screws included)	9900 UXI 106	3CC12013AAAA	6 Kg
1	28 GHz radio-mount (silicon grease, gasket, and screws included)		1AD034950001	0,9 Kg
1	28 GHz flextwist waveguide (l=600mm) (gaskets and fixation kit included)		3CC12178AAAA	0,2 Kg
1	28 GHz RBS and its installation hardware	9900 RBB 001	-	-

Tableau 2: 28 GHz radio link

3 – Installing the equipment

Considerations

See chapter 3.2 of the base station user manual – release 2.2.a (issue 01 from 11/2000)

4 – Installation of outdoor equipment

Considerations

See chapter 3.3 of the base station user manual – release 2.2.a

4.1 – Mounting on the right

4.1.1 – Installation of the pole-mounting on the tube

Considerations

See § 3.3.2 of the base station user manual – release 2.2.a (issue 01 from 11/2000)

4.1.2 – Fixation of the radio mount on the pole-mounting

It is recommended to fix the radio mount in order to have the flange waveguide H polarized.

The o.ring (gasket) must be coated with silicon grease

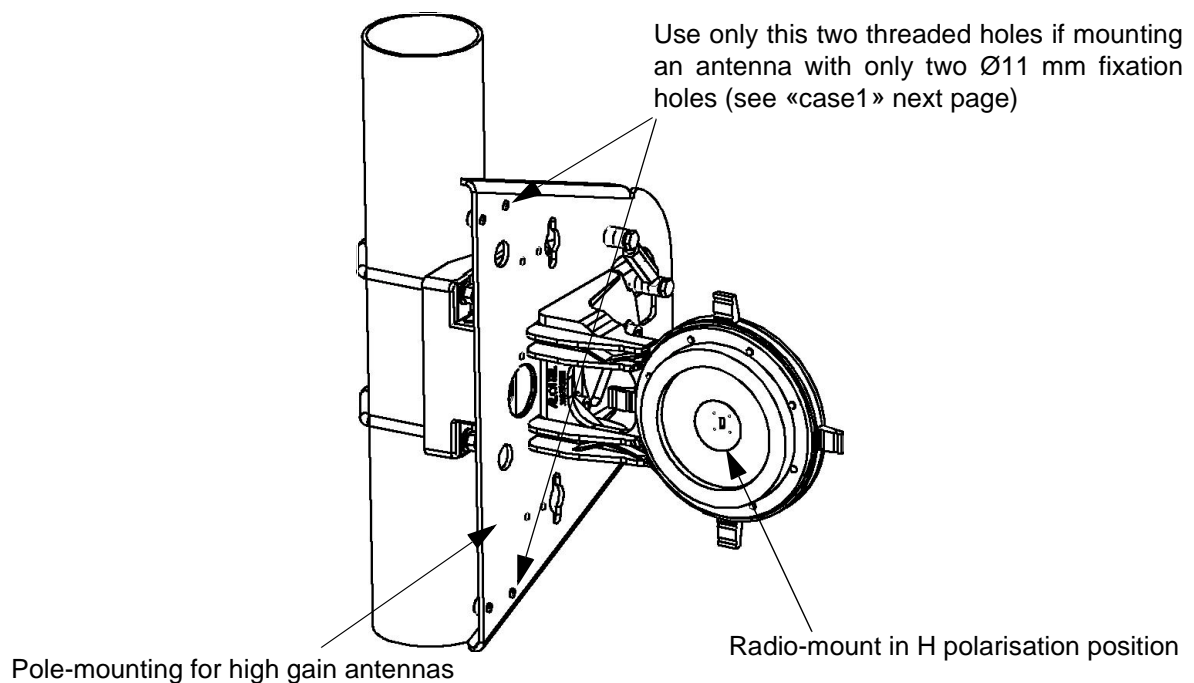



Figure 1 – Pole-mounting and radio mount fixed on the tube

4.1.3 – Fixation of the antenna on the pole-mounting

4.1.3.1 – Two types of antenna can be mounted

Case 1: the antenna has two fixation holes (Ø11 mm)

The antenna must be fixed using the two M10 x 25 screws and the flat washers


ONLY THE TWO THREADED HOLES OF THE POLE-MOUNTING THE CLOSEST FROM THE RADIO-MOUNT MUST BE USED TO SCREW THE TWO M10 SCREWS (SEE FIGURE 1)

Case 2: the antenna has three fixation holes (Ø11 mm)

The antenna must be fixed using the three M10 x 25 screws and the flat washers

There is no possibility in mounting the antenna in a wrong position

4.1.3.2 – Mounting rules

Tightening torque of the M10 screws: 30 Nm

The antenna shall be mounted in such a way that the humidity evacuation hole at the bottom of the radome is facing the ground. The indication “This side up “ on the antenna radome will avoid any confusion. Moreover, the antenna input waveguide is always at the top.

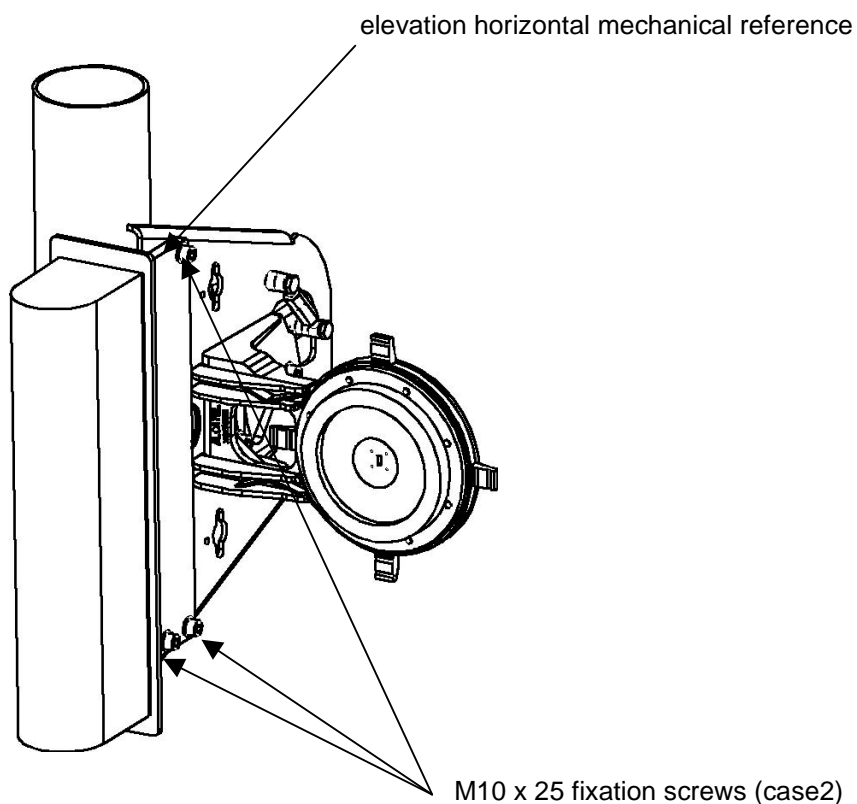


Figure 2 – High gain antenna fixed on the pole-mounting
(the represented antenna is a 180° 18dBi high gain antenna)

4.1.4 – Alignment of the antenna

See the “installation and alignment procedure for an RBS 7390 with a sector antenna”
(3CC 12087 AAAA TQ BJA issue 01)

For the elevation alignment, position the clinometer on the narrow top surface of the antenna
(see “elevation horizontal mechanical reference” on figure 2)

4.1.5 – Installation of the RBS unit

See § 3.3.5 of the base station user manual – release 2.2.a (issue 01 from 11/2000)

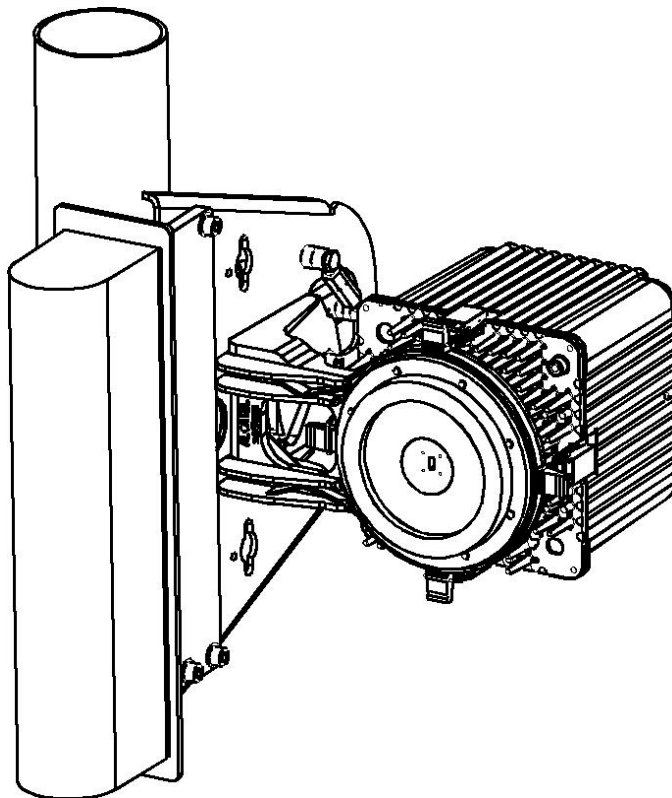


Figure 3 – RBS unit fixed on the pole-mounting

4.1.6 – Installation of the flexible waveguide

Make sure that each waveguide flange has its own o.ring gasket. These two o.ring gaskets must be also coated with silicon grease.

First tighten the flexible waveguide on the radio-mount with the four M3 x 12 screws with flat and waved washers

Then tighten the other waveguide flange to the antenna using the four M3 x 25 screws

(with flat and waved washers also)

Tightening torque = 0,6Nm

Be sure that the waveguide flange is fixed to the radio-mount with the same polarisation direction
(check also for the fixation on the antenna)

Finally, tighten the flexible waveguide to the sheetmetal part of the pole-mounting, using a clamping ring.
A hole for this use is situated just above the waveguide passage opening of the sheetmetal support

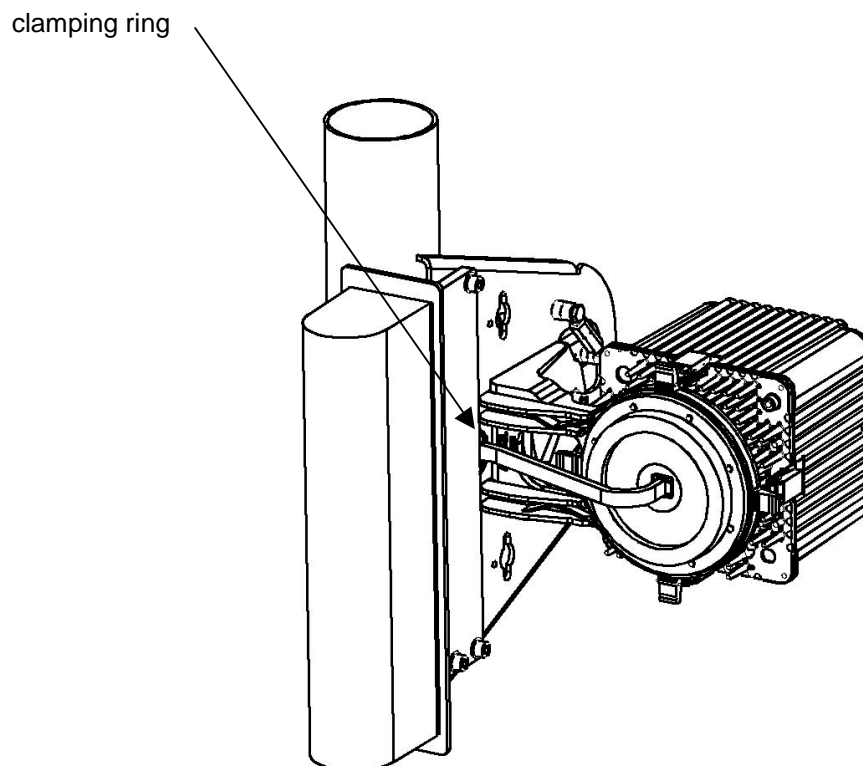
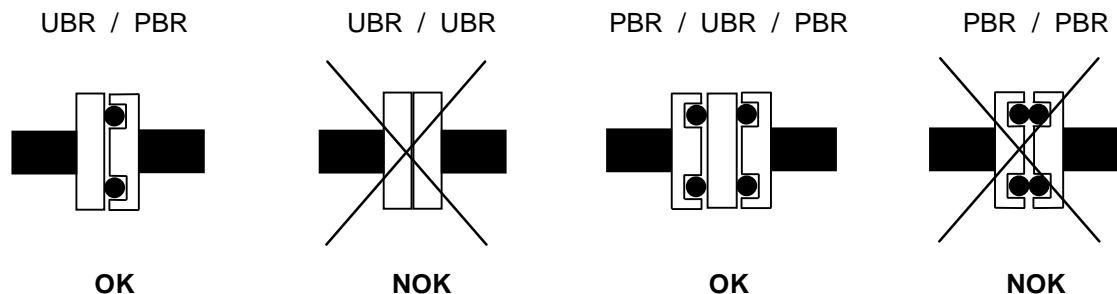


Figure 4 – Flexible waveguide mounted (on the right)

	<p style="text-align: center; margin: 0;">DO NOT USE A WAVEGUIDE WITHOUT THE TWO “PBR TYPE” FLANGES (PBR=EQUIPPED WITH AN O.RING GASKET)</p> <p style="text-align: center; margin: 0;">DO NOT NOT TIGHT TWO UBR FLANGES TOGETHER (SEE EXPLANATION BELOW)</p> <p style="text-align: center; margin: 0;">DO NOT TIGHT TWO PBR FLANGES TOGETHER WITHOUT AN ADAPTATION</p>
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4.2 – Mounting on the left

Mounting phases are similar to “mounting on the right”.

The flexible guide does not get through the sheetmetal part of the pole-mounting and has to be held in position with the help of a clamping ring, which cross the sheet metal part through the two small holes.

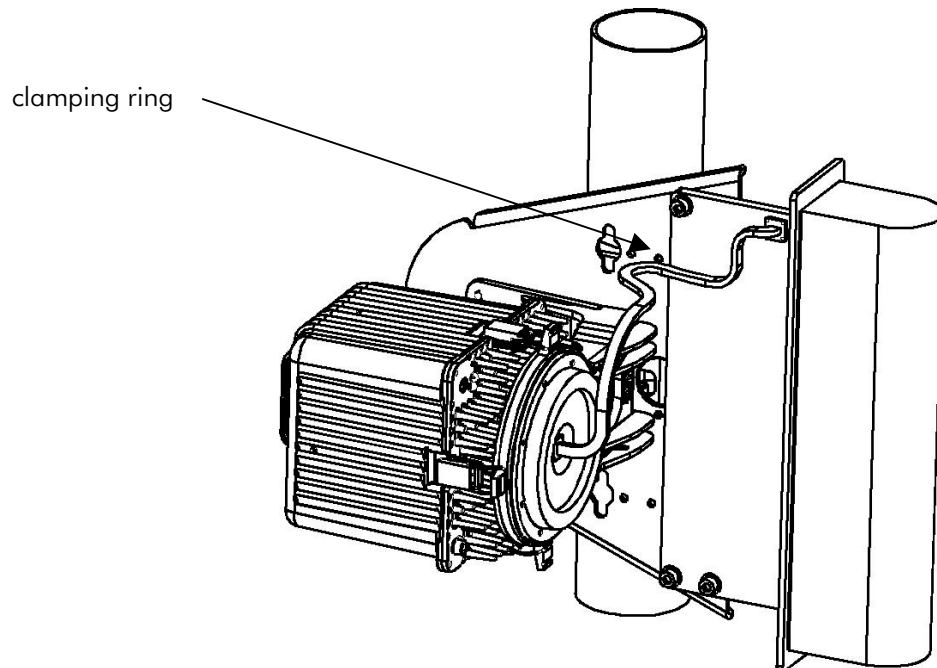


Figure 5 – Flexible waveguide mounted (on the left)

Appendix 1 – Dimensions of the 1+0 configuration

A.1.1 – Front view with overall dimensions

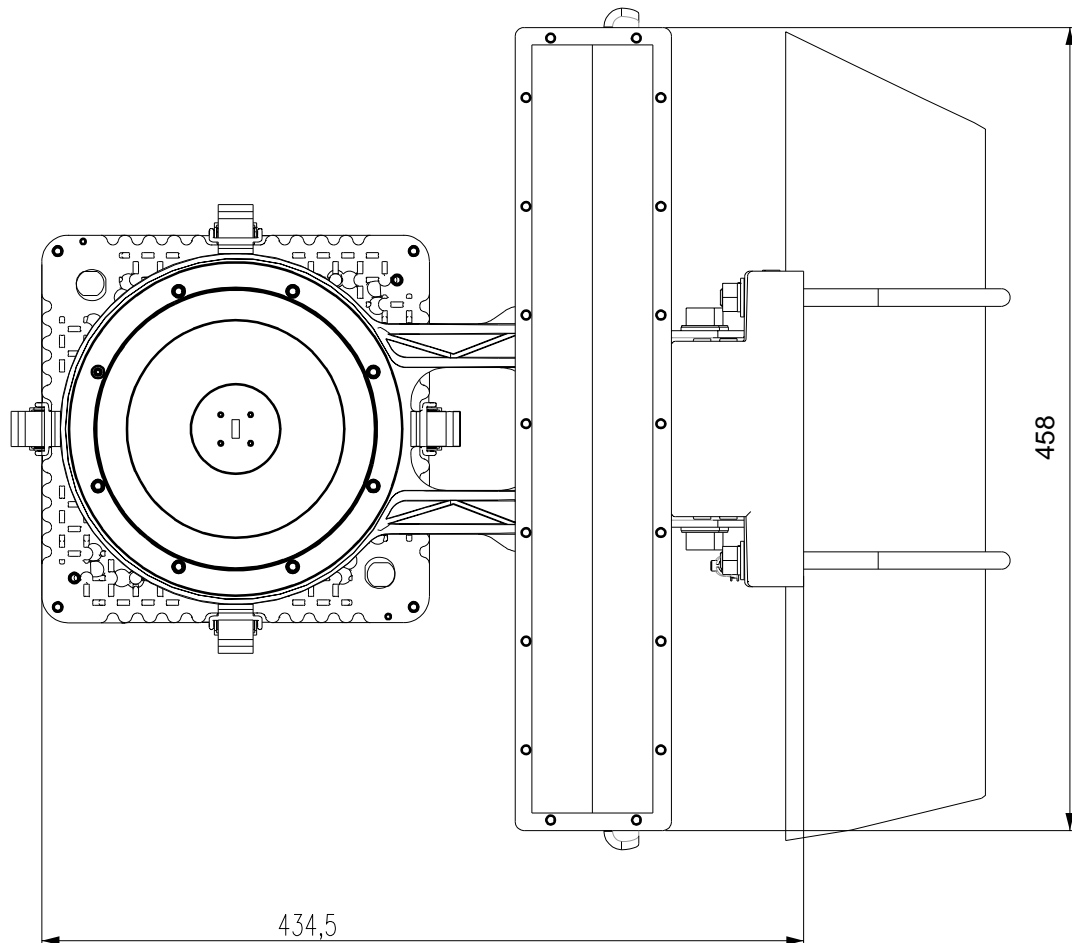


Figure 6 – 90° 21 dBi high gain antenna

A.1.2 – Lateral view with overall dimensions

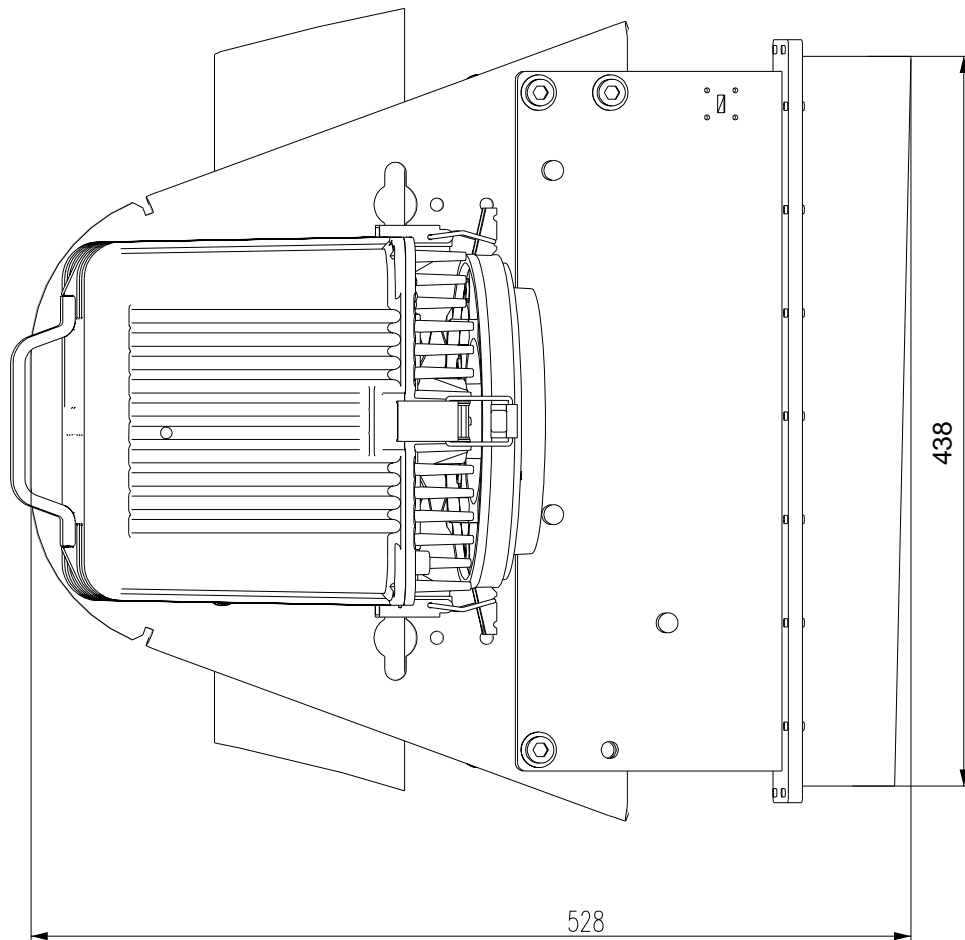


Figure 7 – 90 ° 21 dBi high gain antenna



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