



- **Optimized design of high performance**
- **30 dB nominal gain at center frequency**
- **Very compact size**
- **Low VSWR**
- **Specific gain values can be requested**

Description

Anteral's Communication Lens Horn Antennas are conical horn antennas with a **plano-convex** TEFLON lens added in the aperture, in order to apply phase correction and achieve superior performance with minimum size. The lenses are designed with optimized hyperbolic or spherical profiles to reduce the aberration to the minimum. They are designed to cover the frequency range of 8 to 170 GHz, offering 30 dB nominal gain with a very compact size. Anteral designs all Lens Horn Antennas to show not only high gain, but also low VSWR (< 1.3) and low side lobes.

Applications

Lens Horn Antennas are especially useful when high gain is required with the minimum size. Therefore, these antennas are widely used in radar applications, communication and meteorological systems among others.

On the other hand, Anteral also offers Focusing Lens Horn Antennas with double-convex lenses with optimize performance for material characterization. Check it in Focusing Lens Horn Antenna datasheet.

Additional Notes

Anteral offers custom designs to show any desired gain.

All designs are optimized to offer the maximum gain with the minimum size.

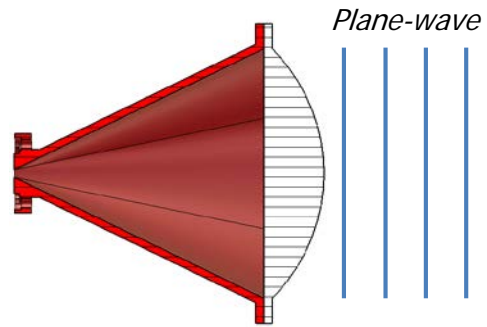
The performance of all devices is checked before delivery.

Extended performance datasheet is available if customer requires. Ask for more information.

Disclosure Information: This document is for information only. Anteral S.L. reserves the right to change this characteristic data and other specifications without notice. Anteral S.L. makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Anteral S.L. assume any liability whatsoever arising out of the use or application of any product(s) or information.

Mechanical and Electrical Specifications

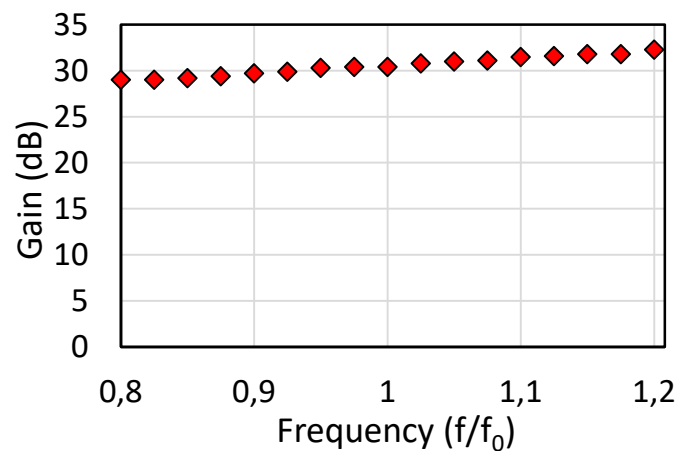
	Description
Typical Gain	> 30 dB
Typical VSWR	< 1.3
External color	Ruby red
Material	Aluminum



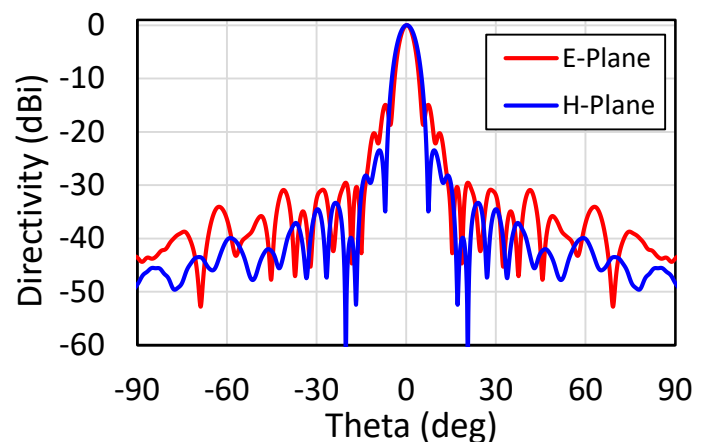
Radiation Pattern Parameters

Frequency [f/f ₀]	Directivity [dBi]	FWHM (deg.)	
		E-plane	H-plane
0.800	29.0	5.7	7.3
0.825	29.0	5.8	7.3
0.850	29.2	5.5	6.8
0.875	29.4	5.4	7.1
0.900	29.7	5.3	6.8
0.925	29.9	5.2	6.4
0.950	30.3	5.0	6.2
0.975	30.4	4.9	6.3
1.000	30.4	4.8	6.0
1.025	30.8	4.6	5.9
1.050	31.0	4.5	5.8
1.075	31.1	4.5	5.4
1.100	31.5	4.2	5.3
1.125	31.6	4.1	5.4
1.150	31.8	4.1	5.2
1.175	31.8	4.1	5.0
1.200	32.3	3.7	5.0

Gain Vs Normalized Frequency



Radiation Pattern (central frequency)



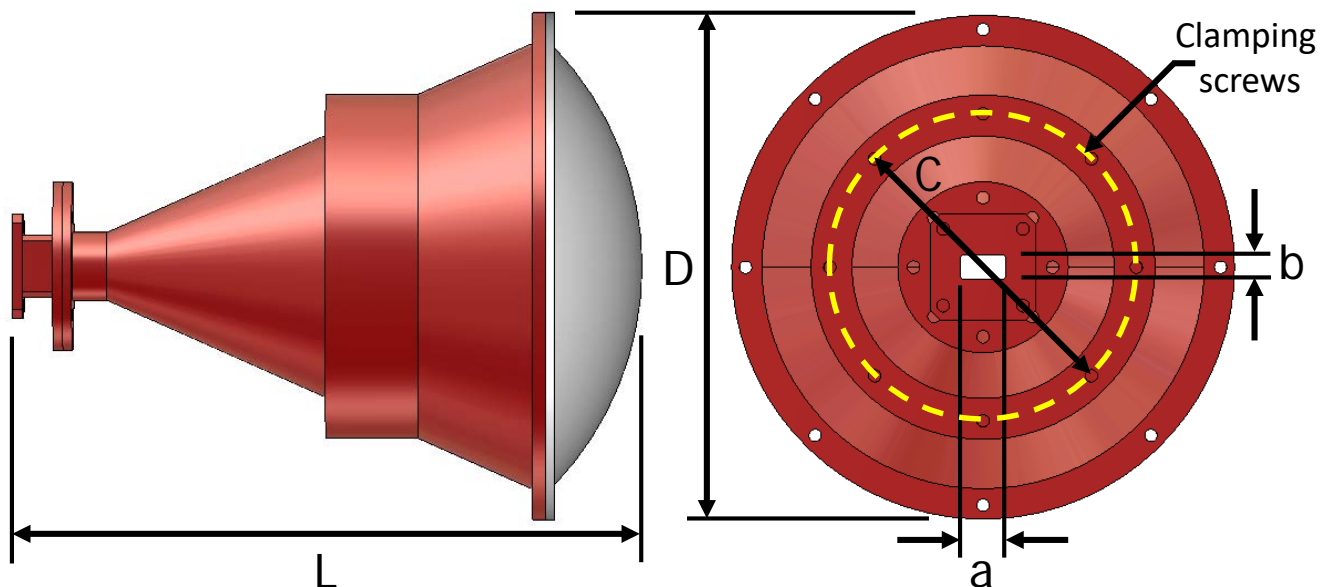
Disclosure Information: This document is for information only. Anteral S.L. reserves the right to change this characteristic data and other specifications without notice. Anteral S.L. makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Anteral S.L. assume any liability whatsoever arising out of the use or application of any product(s) or information.

Antenna Specifications

Rectangular Waveguide Feed

Model	Frequency (GHz)	Input Waveguide	Dimensions a x b (mm)	Standard Flange	D (mm)	L (mm)
LHA-30-WR90	8.2 – 12.5	WR-90	22.860 x 10.160	UG-39/U	362	456
LHA-30-WR62	11.9 – 18	WR-62	15.799 x 7.899	UG-419/U	272	335
LHA-30-WR42	18 – 26.5	WR-42	10.668 x 4.318	UG-595/U	190	227
LHA-30-WR28	26.5 – 40	WR-28	7.112 x 3.556	UG-599/U	130	153
LHA-30-WR22	33 – 50	WR-22	5.690 x 2.845	UG-383/U	108	124
LHA-30-WR19	40 – 60	WR-19	4.775 x 2.388	UG-383/U	93	104
LHA-30-WR15	50 – 75	WR-15	3.759 x 1.880	UG-385/U	72	74
LHA-30-WR12	60 – 90	WR-12	3.0988 x 1.5494	UG-387/U	62	62
LHA-30-WR10	75 – 110	WR-10	2.5400 x 1.2700	UG-387/U	53	51
LHA-30-WR08	90 – 140	WR-08	2.0320 x 1.0160	UG-387/U	43	41
LHA-30-WR06	110 – 170	WR-06	1.6510 x 0.8255	UG-387/U	37	33

*The antenna length includes a rectangular to circular waveguide transition



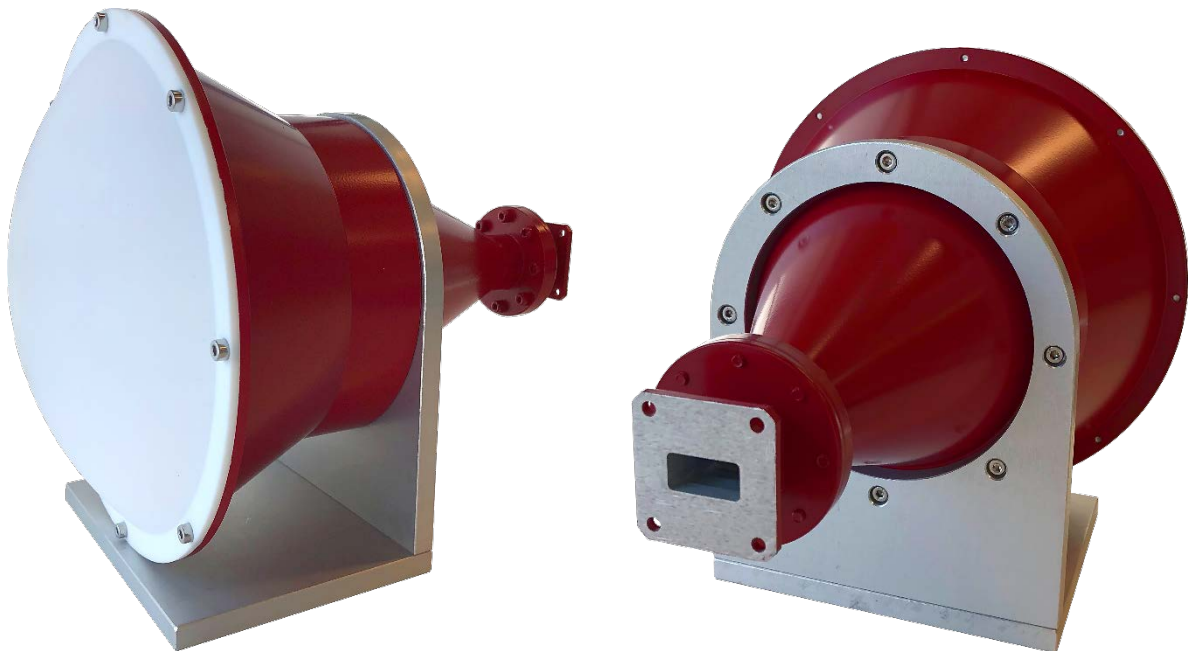
Disclosure Information: This document is for information only. Anteral S.L. reserves the right to change this characteristic data and other specifications without notice. Anteral S.L. makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Anteral S.L. assume any liability whatsoever arising out of the use or application of any product(s) or information.

Dimensions & Clamping Structure

Model	D (mm)	L (mm)	LHA Weight (g)	C (mm)	Clamping Screws	Clamping Structure Weight (g)
LHA-30-WR90	362	456	12120	180	M4 (↓16 mm)	2130
LHA-30-WR62	272	335	4590	152	M4 (↓10 mm)	1160
LHA-30-WR42	190	227	1750	108	M4 (↓10 mm)	630
LHA-30-WR28	130	152	570	75	M3 (↓8 mm)	270
LHA-30-WR22	108	124	380	64	M3 (↓8 mm)	190
LHA-30-WR19	93	104	260	58	M3 (↓8 mm)	150
LHA-30-WR15	72	74	105	-	-	-
LHA-30-WR12	62	62	70	-	-	-
LHA-30-WR10	53	51	50	-	-	-
LHA-30-WR08	43	41	30	-	-	-
LHA-30-WR06	37	33	20	-	-	-

**Clamping structure are only available for bigger and heavy models*

***Clamping structure base can be drilled with custom through holes*



Disclosure Information: This document is for information only. Anteral S.L. reserves the right to change this characteristic data and other specifications without notice. Anteral S.L. makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Anteral S.L. assume any liability whatsoever arising out of the use or application of any product(s) or information.