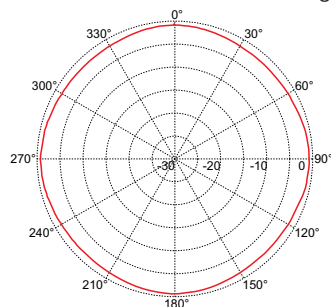
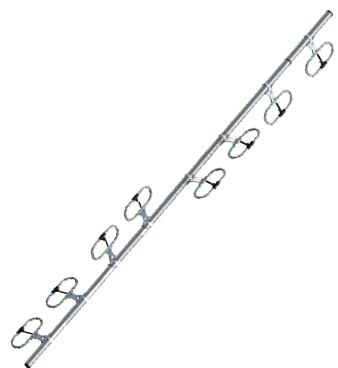


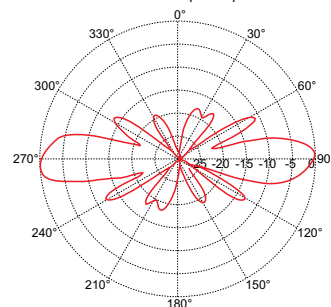
RADIATION PATTERNS

The assembly configurations depend on the application, as follows:

- Omnidirectional configuration: all elements must be orthogonal to each other (90°).

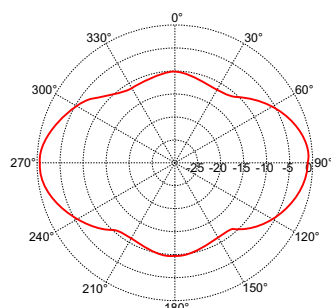
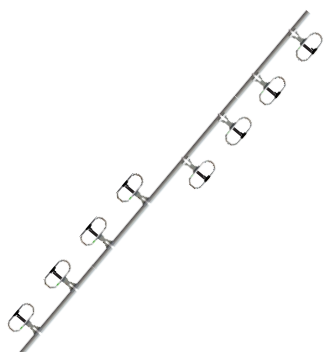


Omnidirectional horizontal polarization (H Plane)

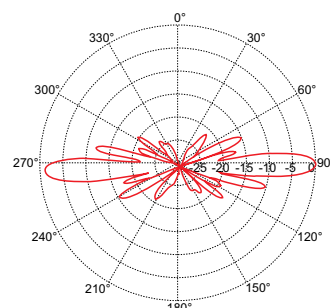


Omnidirectional vertical polarization (E Plane)

- Bidirectional configuration: 4 elements positioned to one side and the other 4 elements to the other side (180°).

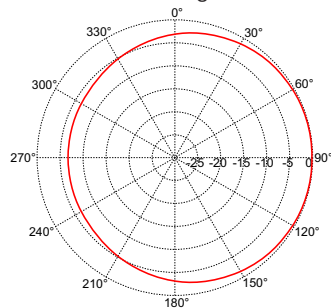
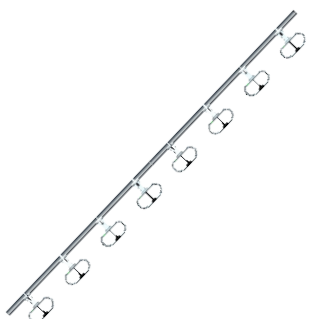


Bidirectional horizontal polarization (H Plane)

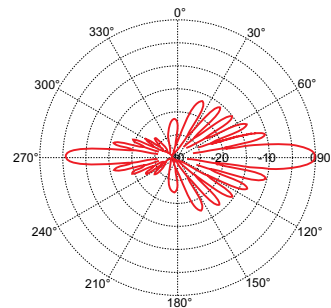


Bidirectional vertical polarization (E Plane)

- Offset configuration: all 4 elements must be aligned in the same direction.



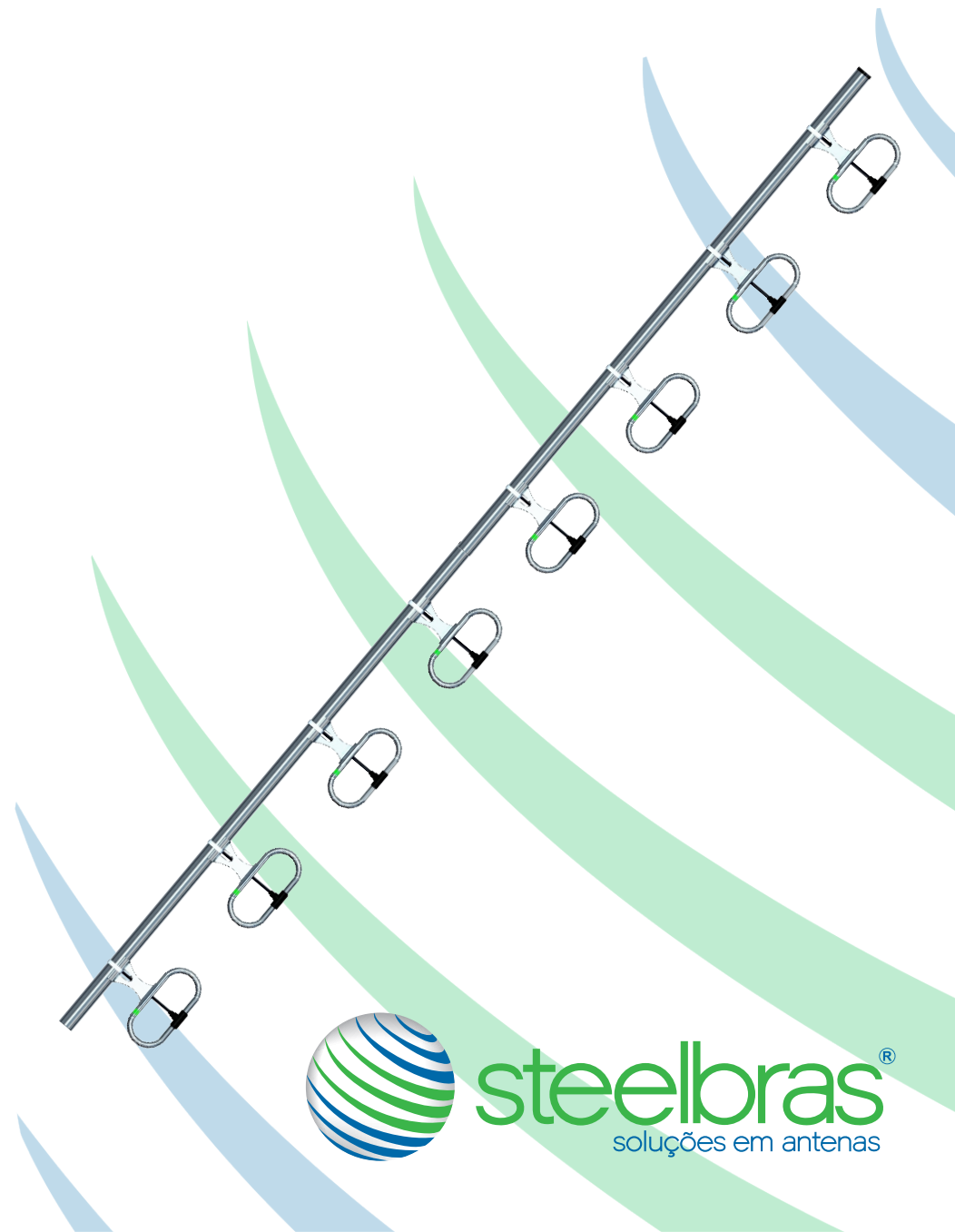
Offset horizontal polarization (H Plane)



Offset vertical polarization (E Plane)

UHF COLLINEAR BASE ANTENNA 440 - 470 MHZ 8 ELEMENTS W/ 1:2 DIVIDER

AP21701 - AP21711



Av. Cidade Fukuyama, 725 - CEP 19064-210 - Presidente Prudente - SP

www.steelbras.com.br



23/09/2024



steelbras[®]
soluções em antenas

These are base antennas operating in the UHF band (440 - 470 MHz), 8 element collinear type with folded dipoles. Made of high-quality aluminum and coaxial cable. Their radiation pattern has a low main lobe angle, providing excellent signal coverage and repeater station performance. This antenna includes a 1:2 power divider operating from 420 to 470 MHz.

Frequency	Products	Connector
		Female N
440 - 470 MHz	Dipole + Boom + Angle bracket	AP21701
	Dipoles only	AP21711

ELECTRICAL SPECIFICATIONS

IMPEDANCE	50 OHMS
VSWR	≤ 1,5:1
MAXIMUM POWER	350 W
CONNECTOR	FEMALE N
GROUNDING	DC GROUND (DC SHORT-CIRCUIT) 11,0
OMNIDIRECTIONAL GAIN	dBi
BIDIRECTIONAL GAIN	10,0 dBi
OFFSET GAIN	14,0 dBi
OMNIDIRECTIONAL VERTICAL HALF-POWER BEAMWIDTH	18,4°
OMNIDIRECTIONAL HORIZONTAL HALF-POWER BEAMWIDTH	-
BIDIRECTIONAL VERTICAL HALF-POWER BEAMWIDTH	10,2°
BIDIRECTIONAL HORIZONTAL HALF-POWER BEAMWIDTH	52,5°
OFFSET VERTICAL HALF-POWER BEAMWIDTH	8,4°
OFFSET HORIZONTAL HALF-POWER BEAMWIDTH	200,5°
OMNIDIRECTIONAL VERTICAL SIDE LOBE LEVEL	-8,2 dB
BIDIRECTIONAL VERTICAL SIDE LOBE LEVEL	-2,7 dB
OFFSET VERTICAL SIDE LOBE LEVEL	-10,1 dB

MECHANICAL SPECIFICATIONS

BOOM DIAMETER	50,8 MM
BOOM LENGTH	4000 MM
ELEMENT DIAMETER	19,05 MM
MAIN MATERIAL	ALUMINUM
WEIGHT	14,2 kg
WIND EXPOSURE AREA	0,72 M ²
SURVIVAL WIND	220 km/h
OPERATING WIND	110 km/h
ELEMENT SPACING (CENTER TO CENTER)	500 MM

Mount the elements on the boom as shown in the illustration alongside, following the marking and logical number sequence (top to bottom, number "1" at the top and "4" at the bottom). The green tapes on the dipoles must face down, and the word "STEELBRAS" (raised lettering) must also be in the position shown in the "Dipole orientation" figure. NOTE: to keep the radiation patterns and gains as described in this document, the elements must be fastened in the correct order, orientation and position according to the markings on the boom. Secure the coaxial cables connecting the elements with good-quality insulating tape. Protect the connection with self-fusing tape to prevent leaks and ensure better performance.

Suggested accessories:

AP18180 - Antenna mount with adjustable tower clamp.

AP16952 - Straight female N x female surge protector with

AP16953 - flange. Straight female N x female surge protector

AP16951 - without flange. Grounding kit for RG213 cable.

