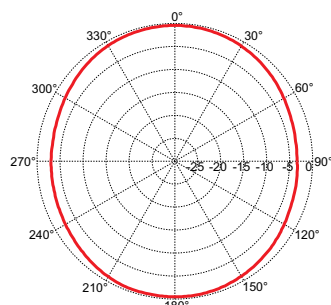
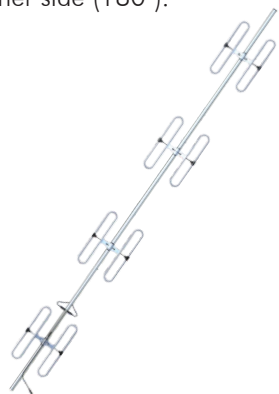
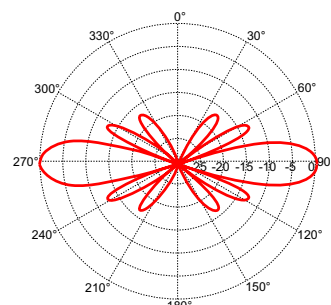


The assembly configurations depend on the application, as follows:

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

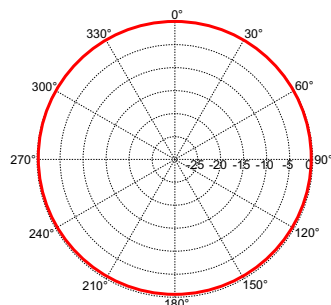
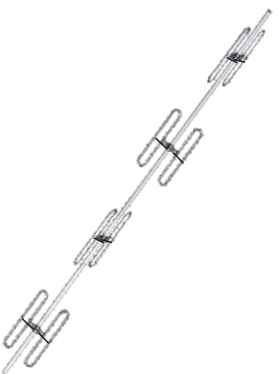


Bidirectional horizontal polarization (H Plane)

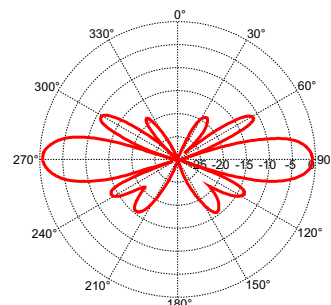


Bidirectional vertical polarization (E Plane)

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



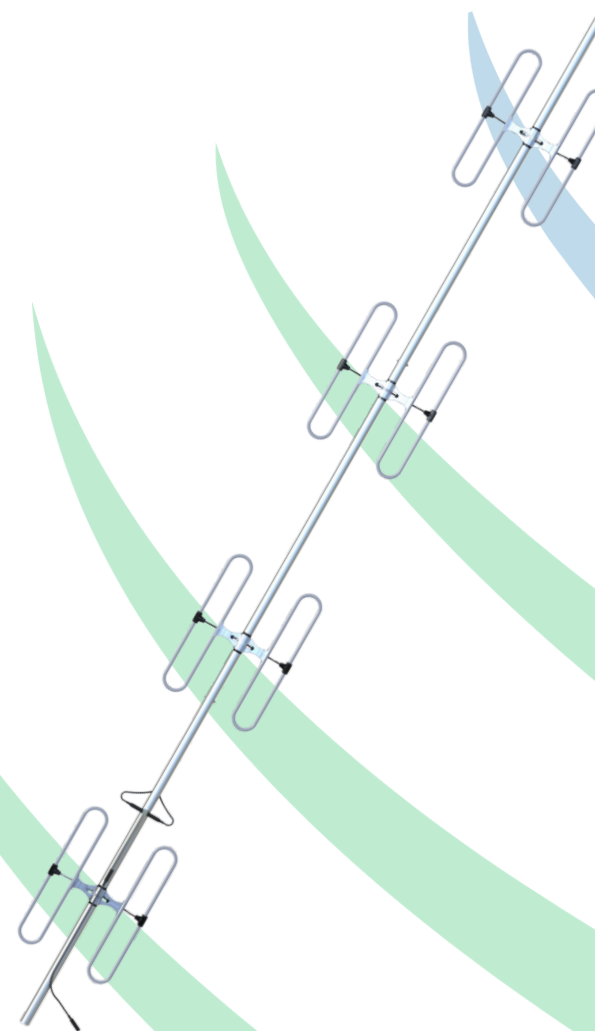
Omnidirectional horizontal polarization (H Plane)



Omnidirectional vertical polarization (E Plane)

VHF COLLINEAR BASE ANTENNA 8 ELEMENTS 155 - 174 MHz

AP20702



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

www.steelbras.com.br



16/04/2024



steelbras
soluções em antenas

The AP20702 is a base antenna operating in the VHF band (155 - 174 MHz), a 8 element collinear with folded dipoles. Made of high-quality aluminum and coaxial cable. Its 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 134 to 174 MHz.

Frequency	Products	Female N
		Connector
155 - 174 MHz	Dipole + Boom + Angle bracket Dipoles Connector only	AP20702
		AP20712

ELECTRICAL SPECIFICATIONS	
IMPEDANCE	50 OHMS
VSWR	≤ 1,5:1
MAXIMUM POWER	350 W
CONNECTOR	FEMALE N
GROUNDING	DC GROUND (DC SHORT-CIRCUIT) 10,0
OMNIDIRECTIONAL GAIN	dBi
BIDIRECTIONAL GAIN	8,15 dBi
OMNIDIRECTIONAL VERTICAL HALF-POWER BEAMWIDTH	18,7°
OMNIDIRECTIONAL HORIZONTAL HALF-POWER BEAMWIDTH	-
BIDIRECTIONAL VERTICAL HALF-POWER BEAMWIDTH	18,8°
BIDIRECTIONAL HORIZONTAL HALF-POWER BEAMWIDTH	120,8°
OMNIDIRECTIONAL VERTICAL SIDE LOBE LEVEL	-10,7 dB
BIDIRECTIONAL VERTICAL SIDE LOBE LEVEL	-11,8 dB

MECHANICAL SPECIFICATIONS	
BOOM DIAMETER	50,8 MM
BOOM LENGTH	6000 MM
ELEMENT DIAMETER	19,05 MM
MAIN MATERIAL	ALUMINUM
WEIGHT	20,16 kg
WIND EXPOSURE AREA	0,64 M²
SURVIVAL WIND	220 km/h
OPERATING WIND	110 km/h
ELEMENT SPACING (CENTER TO CENTER)	1505 MM

Mount the elements on the boom as shown in the illustration alongside, following the marking and logical number sequence (bottom to top, number "1" at the bottom and "4" at the top). 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.

