

R 70-3/..., R 70-7/..., R 70-10/...

Directional Antennas with 3, 7 and 10 dBd Gain for the 450 MHz Band

- These antennas are 2-, 4- and 8-element Yagi antennas with 3, 7, and 10 dBd gain, respectively.

DESCRIPTION

- When mounted for vertical polarization, the horizontal coverage is R 70-3: 150°, R 70-7: 90° and R 70-10: 58°.
- These Yagis incorporate baluns optimized for wide bandwidth and accurate matching.
- The entire balun unit and feeder cable inlet are completely sealed in a polythene moulding ensuring permanent waterproof connections. The antennas are supplied with a 3 m "tail" of RG 213 terminated with an N-female connector.
- Radiating elements, supporting booms and adjoining metal castings have been constructed in high-quality aluminium alloys to prevent corrosion. All metal parts are DC-grounded.
- The antennas are designed for back mounting and are provided with rear extended booms.
- These antennas can be stacked and fed in phase with a matching harness for increased gain.
- A mast clamp for fixation on 30 - 58 mm diameter mast tube is supplied.



ORDERING DESIGNATIONS

TYPE	ANTENNA TYPE	FREQUENCY	PRODUCT NO.
R 70-3/s	2-element Yagi 3 dBd	380 – 420 MHz	Replaced by 7039380
R 70-3/l	2-element Yagi 3 dBd	390 – 430 MHz	Replaced by 7039410
R 70-3/h	2-element Yagi 3 dBd	420 – 470 MHz	Replaced by 7039420
R 70-7/l	4-element Yagi 7 dBd	380 – 430 MHz	Replaced by 7041410
R 70-7/h	4-element Yagi 7 dBd	420 – 470 MHz	Replaced by 7041420
R 70-10/l	8-element Yagi 10 dBd	380 – 430 MHz	Replaced by 7043410
R 70-10/h	8-element Yagi 10 dBd	420 – 470 MHz	Replaced by 7043420

SPECIFICATIONS

ELECTRICAL			
MODEL	R 70-3/...	R 70-7/...	R 70-10/...
ANTENNA TYPE	2-element Yagi	4-element Yagi	8-element Yagi
FREQUENCY	s: 380-420MHz l: 390-430MHz h: 420-470MHz	l: 380-430MHz h: 420-470MHz	l: 380-430MHz h: 420-470MHz
IMPEDANCE	50 Ω		
POLARIZATION	Vertical or horizontal		
GAIN	5 dBi 3 dBd	9 dBi 7 dBd	12 dBi 10 dBd
FRONT TO BACK RATIO	12 dB	15 dB	15.1 dB Typ. better than 19 dB
HALF POWER BEAMWIDTH	E-plane: 75° H-plane: 150°	E-plane: 60° H-plane: 90°	E-plane: 51° H-plane: 58°
BANDWIDTH	40 - 50 MHz		
SWR	≤ 1.5		
MAX. POWER	150 W		
ANTISTATIC PROTECTION	All metal parts DC-grounded (Connector shows a DC-short)		
HCM CODE	HCM050EB30, 030EB30	HCM037EB20, 030EB20	HCM026EB10, 030EB10
MECHANICAL			
TEMP. RANGE	-25° C → +60° C		
CONNECTION	3 m tail of RG 213 terminated with N-female connector		
WIND SURFACE	0.046 m ²	0.061 m ²	0.080 m ²
WIND LOAD	50 N @ 160 km/h	80 N @ 160 km/h	102 N @ 160 km/h
COLOUR	"Aluminium"		
MATERIALS	Elements/Boom/Saddle clamps: Aluminium alloys. Fittings: Stainless steel. Bracket: Hot-dipped galvanized steel		
BOOM LENGTH	Approx. 0.65 m	Approx. 0.9 m	Approx. 1.4 m
BOOM DIA.	31.8 mm		
MAX. ELEMENT LENGTH	0.43 m		
DIA. OF ELEMENTS	13 mm		
WEIGHT	Approx. 3.1 kg	Approx. 3.4 kg	Approx. 3.7 kg
MOUNTING	Supplied with mast bracket suiting 30 - 58 mm dia. mast tube		

TYPICAL RADIATION PATTERN (E-PLANE)



If the antennas are mounted for vertical polarization, these curves show the radiation patterns in the vertical plane.

TYPICAL RADIATION PATTERN (H-PLANE)



If the antennas are mounted for vertical polarization, these curves show the radiation patterns in the horizontal plane (horizontal coverage).