

# 9 elements portable yagi antenna

## 144 to 146 MHz

## Part Nr. 220089



### Electrical data

#### Radiation at 144.5 MHz

Effective electrical length .....	: 1.65 $\lambda$
Isotropic gain .....	: 13.1 dBi
Aperture angle @ -3 dB	
- E-plane .....	: 2 x 20.2°
- H-plane .....	: 2 x 23°
First side lobe set	
- E-plane .....	: - 20.5 dB @ 54°
- H-plane .....	: - 13.6 dB @ 58°
Rear protection .....	: - 19.8 dB
Average stray radiation	
- E-plane .....	: - 35 dB
- H-plane .....	: - 24 dB

### Bandwidth

Gain @ -1 dB .....	: 140 to 148 MHz
Nominal impedance .....	: 50 $\Omega$
Impedance match bandwidth @ SWR <1.3/1.....	: 143.4 to 146.2 MHz
Acceptable RF power (continuous duty) .....	: 1000 W

### Array of 2 or 4 antennas

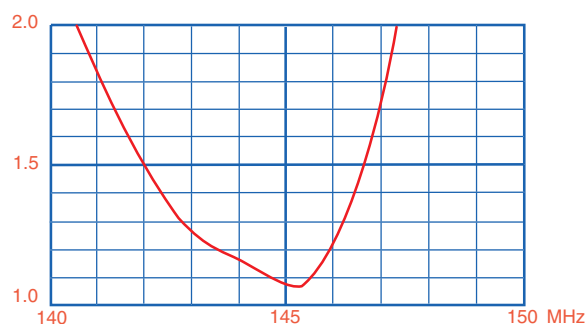
(optimized stacking distance. from center to center of elements. for minimal side lobe radiation)

- E plane - Electrical distance .....	: 1.33 $\lambda$
- Pratical distance .....	: 2.77 m
- H plane - Electrical distance .....	: 1.33 $\lambda$
- Pratical distance .....	: 2.77 m

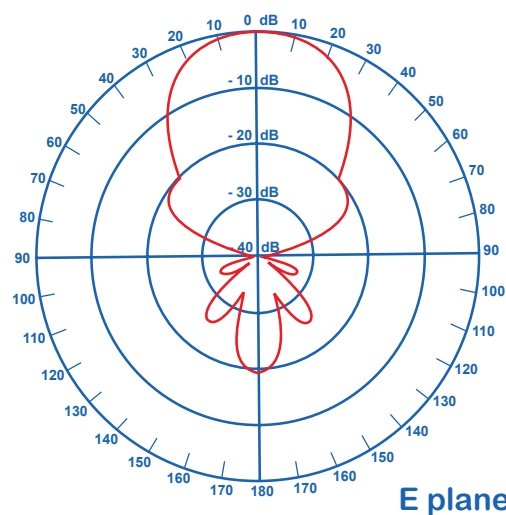
### Mechanical data

Connector .....	: N
Overall length .....	: 3.47 m
Mass .....	: 2.2 kg
Effective wind load	
- Horizontal polarization .....	: 0.7 m <sup>2</sup>
- Vertical polarization .....	: 0.13 m <sup>2</sup>
Approximate wind load (25 m/s - 55 mph)	
- Horizontal polarization .....	: 2.8 daN
- Vertical polarization .....	: 5.0 daN
Approximate wind load (45 m/s - 100 mph)	
- Horizontal polarization .....	: 9.2 daN
- Vertical polarization .....	: 16.3 daN

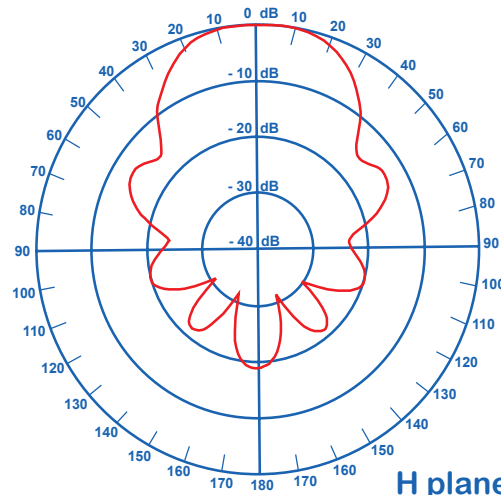
### SWR curve



### Radiation patterns



E plane



H plane

