

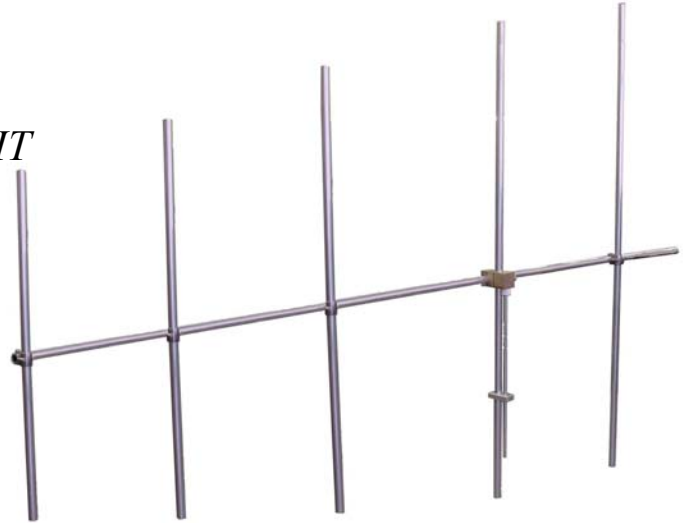


TELECOMUNICAZIONI FERRARA SRL



RVR GROUP

- *Models: AJ5E-AJ5EBI-AJ5E/INOX-AJ5E/IT*
- *High Power Version (H.P.)*
- *FM Band 87.5 ÷ 108 MHz*
- *Suitable for VHF, Band I and OIRT Band on request.*
- *Gamma Match Tuned*
- *Vertical polarization*
- *Light - Low cost - Demountable*



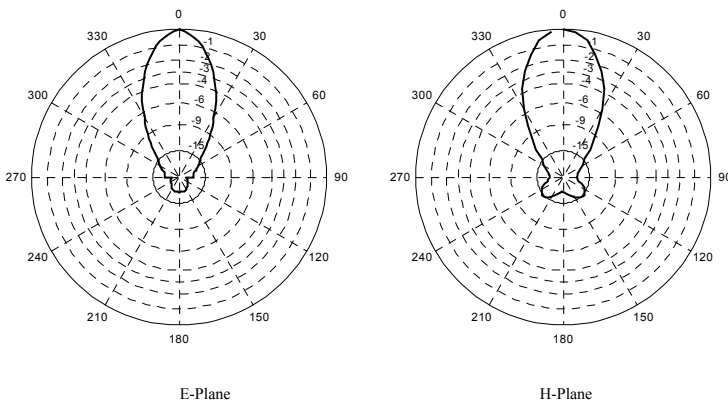
#### ELECTRICAL DATA

|                              |  |
|------------------------------|--|
| <i>Frequency range</i>       | 87.5÷108 MHz                           |
| <i>Impedance</i>             | 50 Ohm                                 |
| <i>Connectors</i>            | N or 7/16" female or 7/8" EIA          |
| <i>Max Power</i>             | 650W (N) –1300W (7/16" – H.P. Version) |
| <i>VSWR ±2MHz</i>            | ≤ 1.1:1 in the operating channel       |
| <i>Polarization</i>          | Vertical                               |
| <i>Gain</i>                  | 9.5 dB (referred to half-wave dipole)  |
| <i>Half power beam width</i> | E plane ± 20°<br>H plane ± 22°         |
| <i>Lightning protection</i>  | No DC grounded                         |

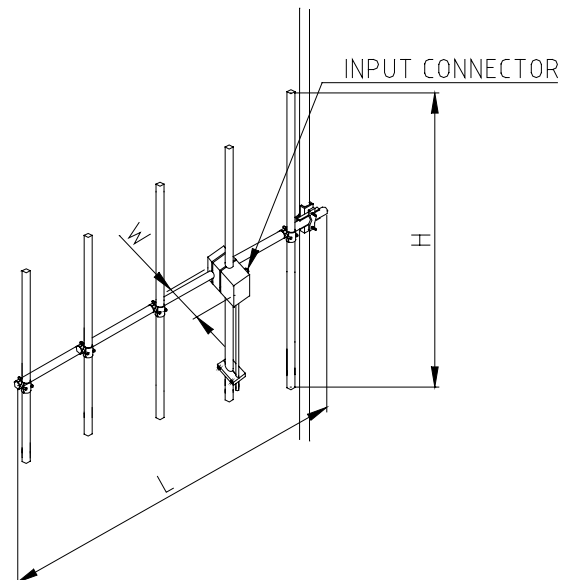
#### MECHANICAL DATA

|                          |   |
|--------------------------|---|
| <i>Dimensions</i>        | According to the working frequency<br>(1500(H)×2700(L)×100(W) mm at 98MHz)  |
| <i>Weight</i>            | According to the working frequency<br>(aluminum or stainless steel)   |
| <i>Wind surface</i>      | 0.23 m <sup>2</sup> ( at 98 MHz)  |
| <i>Wind load</i>         | 30 kg (wind speed at 160 km/h)  |
| <i>Max wind velocity</i> | 160 km/h (AJ5E/IT model)  |
| <i>Materials</i>         | AJ5E: Aluminum elements and boom<br>AJ5EBI: Aluminum elements and inox boom<br>AJ5E/INOX: Inox elements and boom<br>AJ5E/IT: - Inox elements and boom.<br>- Tig Welded Version<br>Teflon insulator<br>Radome: fiberglass (option) |
| <i>Icing protection</i>  | Feed point radome   |
| <i>Radome color</i>      | White (optional)  |
| <i>Mounting</i>          | With special pipe clamps<br>50÷110 mm dia.  |

#### RADIATION PATTERN (MID BAND)



#### DIMENSIONS



# Radiation systems with AJ5E antenna

## Collinears systems

### ELECTRICAL DATA

|                    |  |
|--------------------|--|
| Frequency range    | 87.5÷108 MHz   |
| Impedance          | 50 Ohm   |
| Connector          | EIA flange according to system power rating  |
| VSWR $\pm 2$ MHz   | $\leq 1.1:1$ Max   |
| Polarization       | Vertical   |
| Gain               | According to requirement   |
| Horizontal pattern | Any type according to requirements   |
| Vertical pattern   | Null fill, beam tilt and special requirements to order   |
| Other facilities   | The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power |

### MECHANICAL DATA

|                   |  |
|-------------------|--|
| Height of array   | Subject to number of bays ( refer to table ) |
| Total net weight  | According to the working frequency           |
| Wind load         | Refer to table (at 98 MHz)                   |
| Pressurizable     | No   |
| Radome color      | White (optional)                             |
| Mounting hardware | Hot dip galvanized steel clamps (standard)   |
| Shipping          | As required                                  |

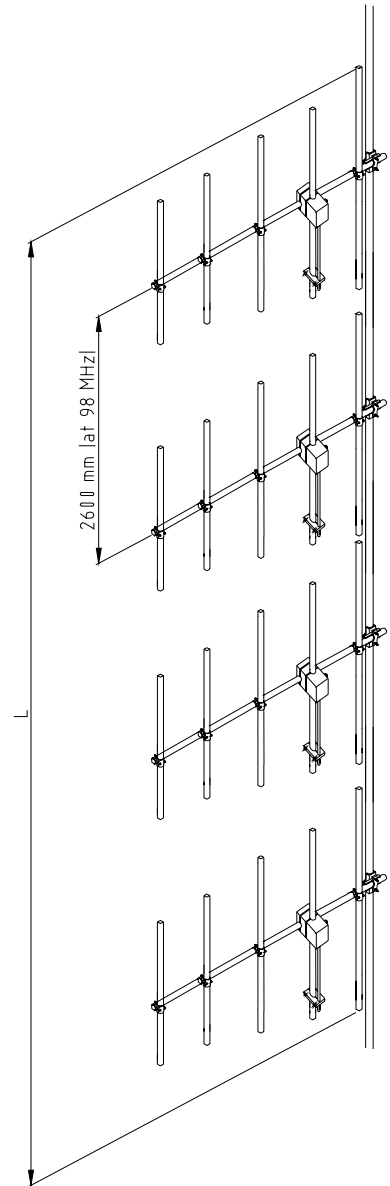
### TECHNICAL DATA

| Number of bays | Dipole per bay | Gain <sup>1</sup> |       | Weight <sup>2</sup><br>Kg | Antenna height L<br>m | Wind load<br>(v=160 km/h)<br>kg |
|----------------|----------------|-------------------|-------|---------------------------|-----------------------|---------------------------------|
|                |                | dB                | times |                           |                       |                                 |
| 1              | 1              | 9.5               | 8.9   | -                         | 1.5                   | 30                              |
| 2              | 1              | 12.5              | 17.8  | -                         | 4.1                   | 60                              |
| 4              | 1              | 15.5              | 35.6  | -                         | 9.3                   | 120                             |
| 6              | 1              | 17.3              | 53.4  | -                         | 14.5                  | 180                             |
| 8              | 1              | 18.5              | 71.3  | -                         | 19.7                  | 240                             |

<sup>1</sup> referred to a half wave dipole. Attenuation of connecting cables not taken into account.

<sup>2</sup> without mounting hardware.

- Gain is provided for vertical polarisation.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing is provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- Five ft(1.6mt) of pipe required above the top bay and below the bottom bay for to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) per EIA-222-C standard.



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