

TX station: 8xAkg7-r  
Gain solid integration : disabled

Site Name: Labelitaly

### General data of Antenna System

|   |  |
|---|--|
| TX station                                  | 8xAkg7-r                                 |
| Site Name                                   | Labelitaly                               |
| System of coordinates                       | Geographic                               |
| Longitude                                   | 00°00'00.000"                            |
| Latitude                                    | 00°00'00.000"                            |
| Ground level a.s.l. (m)                     | 100.0                                    |
| Antenna system height (m)                   | 50.0                                     |
| Transmitter power(Watt)                     | 1000.000                                 |
| Carrier wave frequency (MHz)                | 98.000                                   |
| Antenna system central frequency (MHz)      | 98.000                                   |
| Antenna base diagrams type 1                | LABEL ITALY-AKG_7-R CIRC. POL. DIREC. WB |
| Antenna base diagrams type 2                | -  |
| Polarization (H/V/C/X)                      | C  |
| Transmitting cable attenuation (dB)         | 0.0                                      |
| Additional attenuations(dB)                 | 0.0                                      |
| Base diagrams sectors (T = All, F = Front)  | T  |
| Velocity factor of cables to Antennas (0÷1) | 0.88                                     |
| Coordinate System(C = cartesian, P = polar) | P  |
| Mast side / diameter(cm):                   | 10.0                                     |
| Mast cross section (T/Q/C)                  | C  |
| Structure rotation w.r.t. North (°)         | 0.0                                      |
| Mast rotation w.r.t. North (°)              | 0.0                                      |

### Information about antennas used in the System

|                         |                       |
|-------------------------|-----------------------|
|                         | <i>Antenna type 1</i> |
| Manufacturer            | LABEL ITALY           |
| Antenna model           | AKG_7-R CIRC. POL.    |
| Band start(MHz)         | 98                    |
| Band stop(MHz)          | 98                    |
| diagrams Frequency(MHz) | 98                    |
| Polariz (H,V,C,X)       | C                     |
| Vertical dist (cm)      | 260                   |
| Height (cm)             | 120                   |
| Width (cm)              | 120                   |
| Thickness (cm)          | 200                   |
| Weight (Kg)             | 19                    |
| Maximum power (KW)      | 3                     |
| Gain (dBd)              | 0.85                  |
| North E.C. (cm)         | 0                     |
| East E.C. (cm)          | 0                     |
| Return loss (dB)        | 20                    |
| R.C.Phase (°)           | 0                     |

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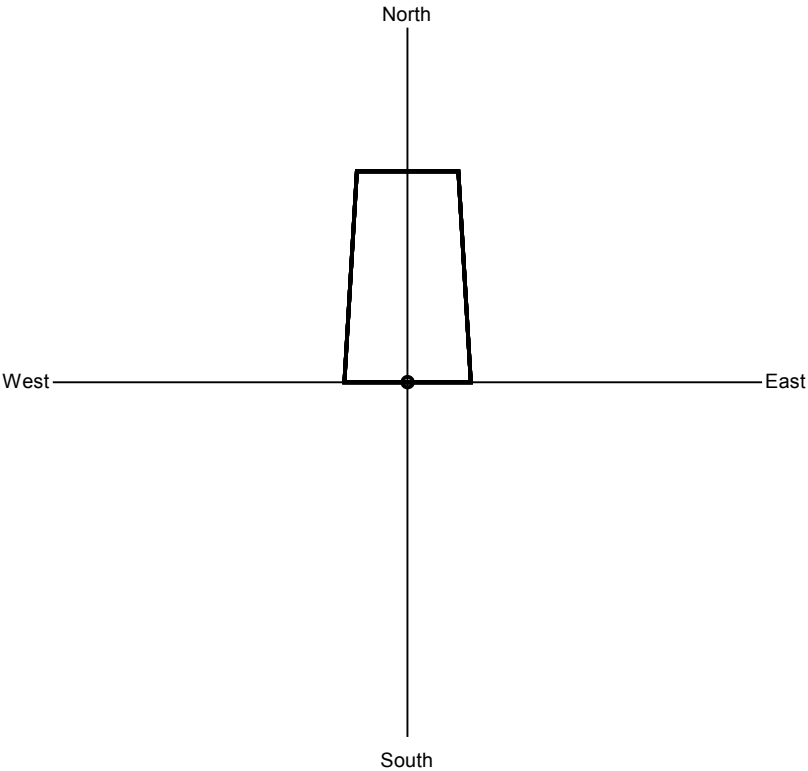
Geometr. and electrical data of Antenna System

|   | <i>Power</i><br>(%) | <i>Tilt</i><br>(°) | <i>Az.</i><br>(°/N) | <i>Phase</i><br>(°) | <i>V dist.</i><br>(m) | <i>Scr-d</i><br>(cm) | <i>Scr-Az</i><br>(°/N) | <i>Rot.</i><br>(1÷4) | <i>Type</i><br>(1÷2) | <i>L cables</i><br>(cm) | <i>Car. phase</i><br>(°) |
|---|---------------------|--------------------|---------------------|---------------------|-----------------------|----------------------|------------------------|----------------------|----------------------|-------------------------|--------------------------|
| 1 | 12.500              | 0                  | 0                   | 0 +0.0              | 9.10                  | 0.0                  | 0.0                    | 1                    | 1                    | 0.0                     | 0.0                      |
| 2 | 12.500              | 0                  | 0                   | 0 +0.0              | 6.50                  | 0.0                  | 0.0                    | 1                    | 1                    | 0.0                     | 0.0                      |
| 3 | 12.500              | 0                  | 0                   | 0 +0.0              | 3.90                  | 0.0                  | 0.0                    | 1                    | 1                    | 0.0                     | 0.0                      |
| 4 | 12.500              | 0                  | 0                   | 0 +0.0              | 1.30                  | 0.0                  | 0.0                    | 1                    | 1                    | 0.0                     | 0.0                      |
| 5 | 12.500              | 0                  | 0                   | 0 +0.0              | -1.30                 | 0.0                  | 0.0                    | 1                    | 1                    | 0.0                     | 0.0                      |
| 6 | 12.500              | 0                  | 0                   | 0 +0.0              | -3.90                 | 0.0                  | 0.0                    | 1                    | 1                    | 0.0                     | 0.0                      |
| 7 | 12.500              | 0                  | 0                   | 0 +0.0              | -6.50                 | 0.0                  | 0.0                    | 1                    | 1                    | 0.0                     | 0.0                      |
| 8 | 12.500              | 0                  | 0                   | 0 +0.0              | -9.10                 | 0.0                  | 0.0                    | 1                    | 1                    | 0.0                     | 0.0                      |

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Plan of antenna system



Side of antenna system



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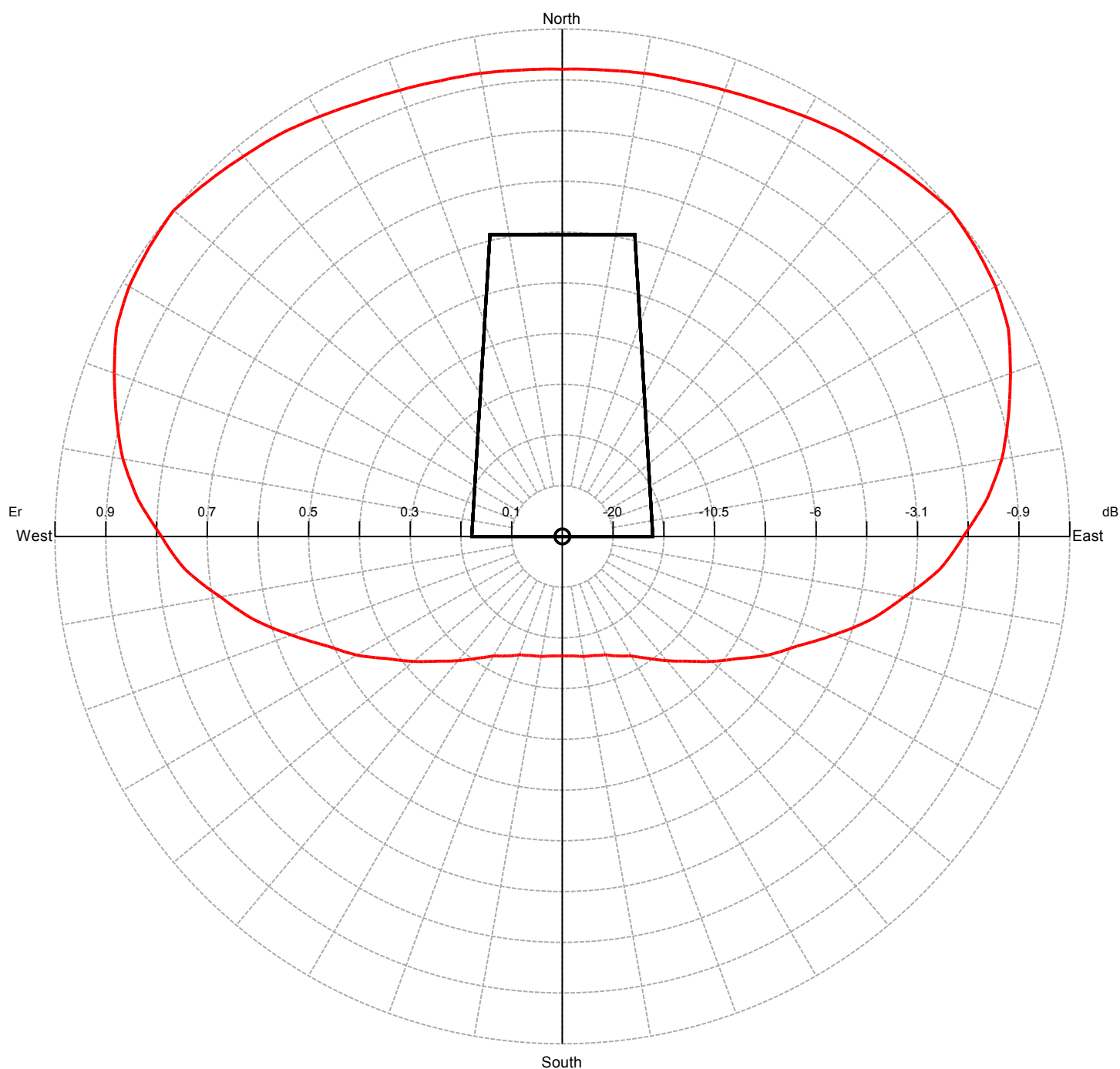
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Antennas arrays data

|                                   |         |
|-----------------------------------|---------|
| A. Antennas array azimuth (°/N)   | 0       |
| B. Number of antennas             | 8       |
| C. Nominal power supply (W)       | 1000.00 |
| D. Losses (addit. + cables) (dB)  | 0.0     |
| E. Effective power supply (W)     | 1000.00 |
| F. Theor. maximum gain (dBd)      | 9.88    |
| G. Distribution losses (dB)       | 0.00    |
| H. Nominal max gain [F - G] (dBd) | 9.88    |
| I. Compensation losses (dB)       | 0.35    |
| J. Effec. max gain [H - I] (dBd)  | 9.53    |
| K. Effec. max gain (times)        | 8.97    |
| L. Effec. max power [E * K] (KW)  | 8.9667  |
| M. Max power depr. angle (°)      | 0.0     |
| N. Max power az. angle (°)        | 310     |

Diagram in dBK calculated at horizon

| Az. (°/N) | dBK | Az. (°/N) | dBK  | Az. (°/N) | dBK  | Az. (°/N) | dBK |
|-----------|-----|-----------|------|-----------|------|-----------|-----|
| 0         | 8.8 | 90        | 7.5  | 180       | -3.0 | 270       | 7.5 |
| 10        | 8.9 | 100       | 6.2  | 190       | -2.9 | 280       | 8.4 |
| 20        | 9.0 | 110       | 4.6  | 200       | -2.6 | 290       | 9.0 |
| 30        | 9.1 | 120       | 2.9  | 210       | -1.8 | 300       | 9.4 |
| 40        | 9.3 | 130       | 1.2  | 220       | -0.4 | 310       | 9.5 |
| 50        | 9.5 | 140       | -0.4 | 230       | 1.2  | 320       | 9.3 |
| 60        | 9.4 | 150       | -1.8 | 240       | 2.9  | 330       | 9.1 |
| 70        | 9.0 | 160       | -2.6 | 250       | 4.6  | 340       | 9.0 |
| 80        | 8.4 | 170       | -2.9 | 260       | 6.2  | 350       | 8.9 |

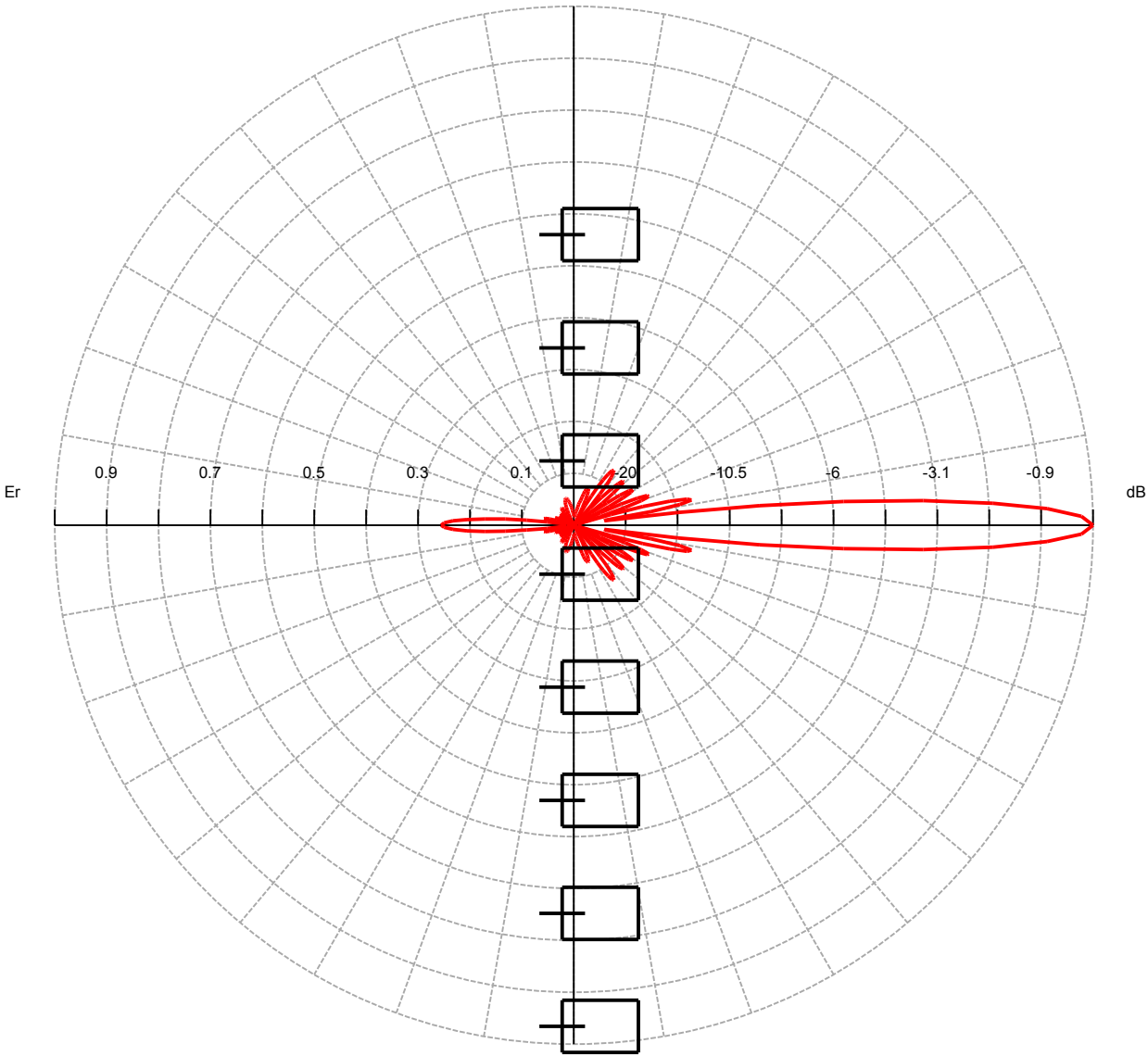


ERP T.Max(KW): 8.9667      ERP E.Max(KW): 8.9667

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Vertical diagram at an azimuth of 0.0° degrees



0.0° Az. (Total Antenna), Gain (dBd): 8.81

ERP T.Max(KW): 7.6059 ERP E.Max(KW): 7.6059