

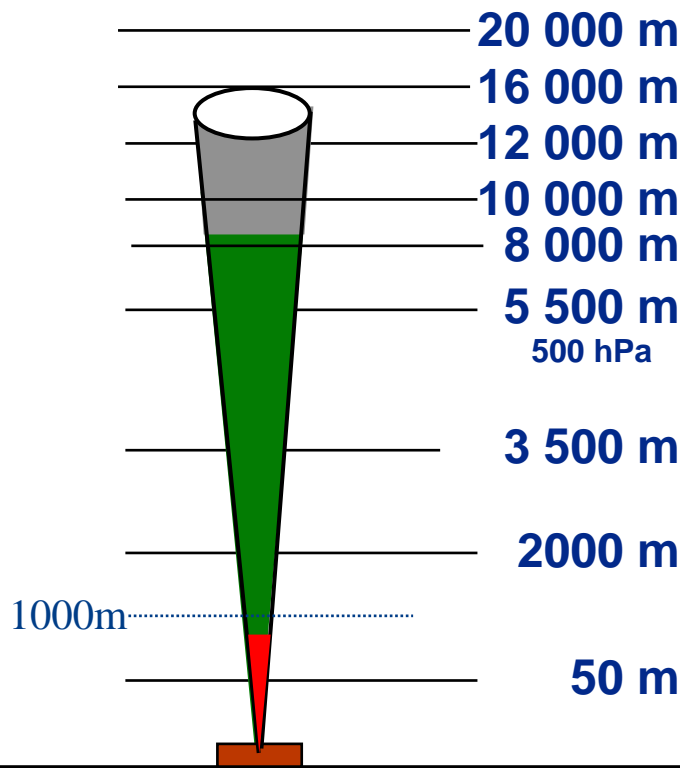
# Vaisala LAP®- 12000, Tropospheric Wind Profiler



*Additional information available from Vaisala Sales Representative*

# LAP<sup>®</sup>-12000, Tropospheric Wind Profiler

This is a complex product custom-made for each customer.  
Please contact Vaisala for more information.



## Operating Frequency:

- 45 - 65 MHz

## Application segments:

- Supplemental/complementary
- Upper-air observations
- Mesoscale networks
- Space launch support
- Defense

- Max Height Dependent on atmospheric scattering conditions and system operating parameters
- Typical measurement range
- Min Height Dependent on clutter environment and available radio frequency emission bandwidth

# LAP-12000 specifications

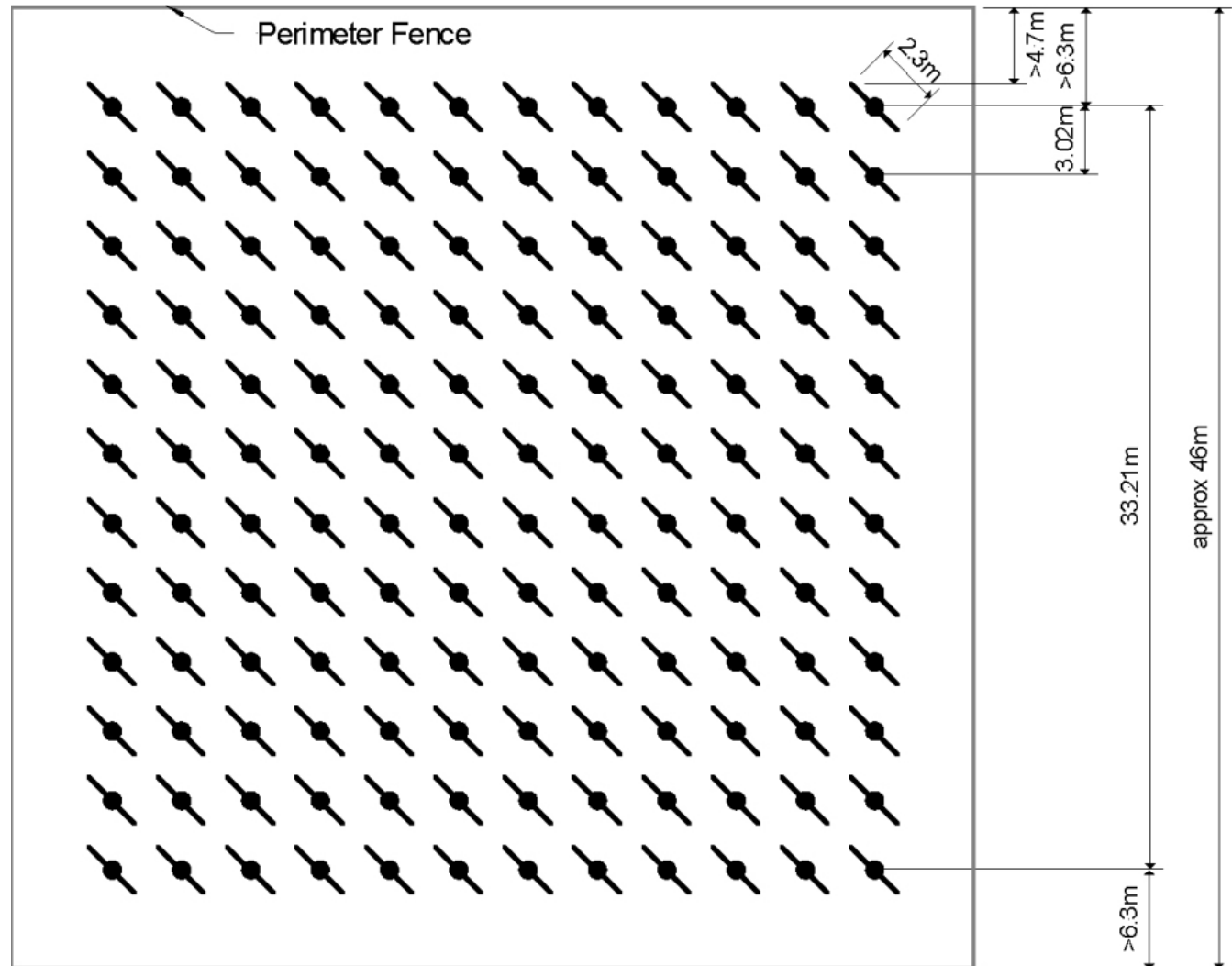
- Operating frequency: Can be chosen between 46 - 68 MHz
- Minimum measurement height: ~500 m, depending on clutter environment and available RF bandwidth
- Maximum measurement height: 6 - 16 km, depending on atmospheric scattering conditions
- Range resolution: 150 – 1000 m
- Wind speed uncertainty: <1 m/s
- Wind direction uncertainty: <10°
- Transmitter average/peak power: 3000/40000 W

# LAP-12000 RASS specification

- RASS frequency: 100 to 150 Hz
- Beamwidth: 40 degrees
- Lowest measurement height: ~500 m, depending on clutter environment and available RF bandwidth
- Maximum measurement height: 3 to 5 km, depending on atmospheric conditions
- Minimum vertical resolution: 150 m
- Temperature accuracy: 1 °C

# LAP<sup>®</sup>-12000 Troposphere WP, 64 MHz antenna field size

- 144 3–element Yagi-Uda antennas
- ~50 m x 50 m footprint



# LAP<sup>®</sup>-12000 Troposphere WP Antenna Array



# LAP<sup>®</sup>-12000, Mid-Tropospheric Wind Profiler

- LAP<sup>®</sup>-12000 is customized product and detailed information of the customer's application is needed
- Vaisala needs the following information:
  - The intended use
  - The measurement range requirement
    - Resolution
    - Requirement for virtual temperature measurement
  - Available frequency on 45 - 65 MHz band
    - One point frequency must be selected
  - Intended installation location
    - Conditions and climate
    - Area available for the antenna. Minimum flat area is 50 m x 50 m depending on selected operating frequency (see example dimensions for 64 MHz on next slide)
    - Infrastructure, power and communication available