

## Density Altitude Calculator

- using dew point -

To use the calculator, just click the type of units that you will be entering, then enter the elevation, temperature, altimeter setting and dew point... then click the calculate button.

| Density Altitude Calculator   |   |                              |   |        |
|---|---|------------------------------|---|--------|
| Elevation   | <input checked="" type="radio"/> feet                   | <input type="radio"/> meters | <input style="width: 90%;" type="text" value="4920"/>   |        |
| Air Temperature   | <input checked="" type="radio"/> deg F                  | <input type="radio"/> deg C  | <input style="width: 90%;" type="text" value="71"/>     |        |
| Altimeter Setting   | <input checked="" type="radio"/> inches Hg              | <input type="radio"/> hPa    | <input style="width: 90%;" type="text" value="29.82"/>  |        |
| Dew Point   | <input checked="" type="radio"/> deg F                  | <input type="radio"/> deg C  | <input style="width: 90%;" type="text" value="35"/>     |        |
| <input type="button" value="Calculate"/> <input type="button" value="Reset"/> |   |                              |   |        |
| Density Altitude  | <input style="width: 80%;" type="text" value="7015"/>   | feet                         | <input style="width: 80%;" type="text" value="2138"/>   | meters |
| Absolute Pressure   | <input style="width: 80%;" type="text" value="24.884"/> | inches Hg                    | <input style="width: 80%;" type="text" value="842.67"/> | hPa    |
| Air Density   | <input style="width: 80%;" type="text" value="0.062"/>  | lb/ft3                       | <input style="width: 80%;" type="text" value="0.993"/>  | kg/m3  |
| Relative Density  | <input style="width: 80%;" type="text" value="81.03"/>  | %                            | <input style="width: 80%;" type="text" value="81.03"/>  | %      |
| Estimated AWOS  | <input style="width: 80%;" type="text" value="6900"/>   | feet                         | <input style="width: 80%;" type="text" value="2103"/>   | meters |
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### Additional Information:

Example calculations:

Example 1: at 5050 feet elevation, 95 deg F air temp, 29.45 inches-Hg barometric pressure and a dew point of 67 deg F, the Density Altitude is calculated as 9252 feet.

Example 2: at 1540 meters elevation, 35 deg C air temp, 997 hPa barometric pressure and a dew point of 19 deg C, the Density Altitude is calculated as 2821 meters.

The metric unit hPa (hectoPascal) is identical to the pressure unit called mb (milliBar).

Air density is affected by the air pressure, temperature and humidity. The density of the air is reduced by decreased air pressure, increased temperatures and increased moisture. A reduction in air density reduces engine horsepower, reduces aerodynamic lift and reduces drag.