

Type certification. Official recognition that the design and operating limitations of an aircraft, engine, or propeller meet the airworthiness standards prescribed by the Code of Federal Regulations for that particular category or type of aircraft, engine, or propeller.

Uncontrolled lift. Lift that occurs without specific action by the pilot. Often referred to as false lift.

Useful lift (load). The potential weight of the pilot, passengers, equipment and fuel. It is the basic empty weight of the aircraft subtracted from the maximum allowable gross weight.

VAD winds. In weather; velocity azimuth display winds are derived from the output of the 160 or more WRS-88 radar sites located throughout the United States. The WRS-88 is configured to produce radar returns off of dust and other particulate matter in the air, and in turn, those returns can be used to indicate wind direction and speed at different altitudes. Generally reported in 1000 foot increments.

Variometer. See Vertical Speed Indicator.

Vent. (1) The action of opening the vent to cool the air in the envelope. (2) An envelope opening that will automatically close.

Vertical Speed Indicator (VSI). An instrument that continuously records the rate at which an aircraft climbs or descends. Usually measured in FPM. A required instrument in a balloon.

Vent line. The line that activates the cooling vent.

Visual Flight Rules (VFR). Flight rules governing aircraft flight when the pilot has visual reference to the ground at all times.

Virga. Precipitation that falls from a cloud and evaporates before reaching the ground.

Volume. The total amount of air or gas (expressed in cubic feet) contained in a balloon envelope.

Warm front. In weather, the leading edge of a warm air mass displacing a colder air mass.

Warp. The threads in a piece of fabric that run the length of the fabric.

Weigh-off. Determine neutral buoyancy of a gas balloon or airship by taking weight off at launch.

Wind direction. The direction the wind is coming from.

Wind shear. A strong and sudden shift in wind speed or direction, which may be either vertical or horizontal. Wind shear should not be confused with normal wind change, which is gentler. Wind shear is often associated with the passage of a weather front, or a strong temperature inversion.

WINGS Program. A program that encourages general aviation pilots to continue training and provides an opportunity to practice selected maneuvers in a minimum of instruction time. Participation in the WINGS program relieves a pilot from compliance with flight review requirements, provided all WINGS requirements are met. Previously governed by Advisory Circular 61-91, the WINGS program is available as an online education program at www.faa.gov, effective mid-2007.