

Windvane

Weather Wiz

The use of simple instruments to indicate the direction of wind is very old practice. However, the measurement of its force and speed is a much more recent accomplishment. The first record of the wind vane was first done about 300 years ago, but the first practical use of this instrument took place in the last half of the 1800s.

Anemometer (Greek anemos, “wind”; metron, “measure”), an instrument that measures wind speed. The most common kind of anemometer consists of three or four cups attached to short rods that are connected at right angles to a vertical shaft. As the wind blows, it pushes the cups, which turn the shaft. The number of turns per minute is translated into wind speed by a system of gears similar to the speedometer of an automobile. Wind velocity is also measured by the pressure of the air blowing into a Pitot tube (an L-shaped tube, one end open toward the flow of air and the other end connected to a pressure-measuring device), and electrically by the cooling effect of the wind on a heated wire, which causes the electric resistance of the wire to change.

An anemometer in which surface is held normal, or nearly normal, to the wind is theoretically simple but more difficult in practice.

