

## Hot Wire vs Vane Anemometers

Anemometers measure air velocity. There are two basic types for different applications:

### **Thermoelectric (Hot Wire) Anemometers**

Hot Wire Anemometers heat a wire to a specified temperature and then measure the rate of cooling. This rate is proportional to air speed. Thermoelectric measurement provides fast response times and excellent sensitivity to very low air flows <1 m/s but these probes are also the most delicate of the two types are not suitable for environments which are dusty, humid, corrosive or where there are rapid fluctuations in the ambient temperature, all of which effect the rate of cooling.

### **Vane Anemometers**

Vane Anemometers work on the principle that a freely turning turbine will rotate at a speed directly proportional to the wind speed. Anemometers cover ranges as low as 0.15 m/s and as high as 40 m/s. Useful for a wide variety of applications including relatively harsh environments. Thresholds are not as low as with thermoelectric anemometers since the vane must overcome initial friction before it will turn.