



## LAKSHMI ENGINEERING WORKS

**Mfg & Supp of:** Soil, Cement and Concrete Testing Equipment, Survey, Drawing, Hydrological, Metrological, Geological, Scientific Instruments (**All type of Water Current Meters**)  
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### SUBJECT: PORTFOLIO OF M/s LAKSHMI ENGINEERING WORKS

Introducing ourselves as registered makers and suppliers of various varieties of **hydrological, metrological, geological, river gauging, scientific instruments** gives us great pleasure.

With their complete satisfaction, we are providing these things to all government and semi-government departments. In our workshop, we also perform the repairs on these instruments.

All of our instruments come with a one-year warranty from the date of supply. Therefore, we kindly ask

Radio altimeter that you add our company name to your mailing list and ask about our high-quality equipment so that we can provide you with the most affordable quotes.

Thanking You

**PRAVEEN KUMAR**

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**Google: [https://g.page/r/CavSN94Wn\\_oIEBI/review](https://g.page/r/CavSN94Wn_oIEBI/review)**

## CUP COUNTER ANEMOMETER

- A cup anemometer is used to calculate the velocity of wind. The three flat aligned sphere-shaped cups, which are static at right angles or in a stellar form on the perpendicular axis of the cup anemometer, measure the breeze velocity.
- Its working principle is very simple: the resilient the breeze blows, the quicker the partial open plastic cups move. The velocity of the cross revolution regulates the breeze speed.
- This PCE breeze flow meter, also denoted as the cup anemometer, proposes an important benefit in association to the typical impeller anemometers.
- The breeze track is not of vital significance in the calculation of the movement rate. In instruction to be capable to find the breeze velocity finely, the cup anemometer, an alteration to the impeller anemometer, does not have to be retained correctly in the breezeway.
- The placement of the half cups in changed directions confirms that the cup stellar is fixed in indication free of the path. Thus, the flat and less weight cup responds to even the lowest movement speeds. With the perseverance of 0.1 m /seconds, the gaging assortment of the cup anemometer is from 0.9 m / s up to 35 m / s. There are dissimilar components for the movement speeds with m /second, km/hour, knots, miles/hour, ft/min accessible.
- The cup anemometer measures the numeral of revolutions per minute and thus the breeze velocity very precisely. The breeze velocity can be expediently read out from the LCD show (28 x 19 mm) of the cup anemometer.
- The anemometer of PCE Tools stocks extreme and least standards, which can be suitably delivered over on the display far ahead.
- To confirm that the previous dimensions' consequences showed can be observed again, the cup anemometer also has a concrete data grasp task. The calculation statistics are noted and stowed by a valuable 100 point statistics logger.
- The cup anemometer is manifest IP 65, encounters all the circumstances, and is thus secure in contrast to the dispersion of dirt and humidity.
- To save the battery of an anemometer to discharge when it is not in working condition, the meter has an auto power-off controller. After some meter turns off when it finished its working.

The Indian Standard IS 5912:1997 specifies the requirements for cup counter anemometers used for measuring wind speed. Here's a detailed breakdown of the specifications:

### 1. General Description:

- Type: Cup counter anemometer, mechanical.
- Measuring Principle: Rotational speed of three conical cups mounted on a horizontal axis is proportional to wind speed. This rotation drives a gear mechanism connected to a mechanical counter displaying the wind run (total distance traveled by the wind) in kilometers and tenths.

### 2. Construction:

- Cups: Three conical cups made of 0.71 mm thick copper or aluminum sheets.
- Each cup has a diameter of 127.0 mm and a semi-conical shape with beaded edges for better wind capture.
- Cup Arms and Sockets: Made of a suitable aluminum alloy for strength and light weight.
- Housing: Cast aluminum or similar weatherproof material to protect the counter mechanism from harsh environmental conditions.
- Spindle: Turned from stainless steel rod for corrosion resistance and smooth rotation.
- Worm: Cut from manganese-bronze alloy for wear resistance and efficient power transmission.
- Worm Wheel: Made from hard brass for durability and accurate meshing with the worm gear.

### 3. Performance:

- Measuring Range: 0 to 1200 meters per minute (approximately 0 to 72 km/h).
- Accuracy:  $\pm 1\%$  at 20 m/s wind speed (approximately 72 km/h).
- Resolution: 0.1 km.
- Starting Threshold: Wind speed of approximately 1.5 m/s (approximately 5.4 km/h).

### 4. Additional Specifications:

- Gear Ratio: Chosen to display wind run directly in kilometers and tenths without requiring manual calculations.
- Counter Mechanism: Five-figure mechanical counter with reset knob.
- Mounting Bracket: Usually included for attaching the anemometer to a pole or other fixed structure.
- Material Finish: All exposed metal parts should have a corrosion-resistant paint or coating.

### 5. Operating Conditions:

- Temperature Range: 0°C to 80°C.
- Humidity: Up to 95% relative humidity.

## 6. Maintenance:

- Regular cleaning: Remove dust and debris from the cups and housing to ensure accurate measurements.
- Lubrication: Apply light oil to the spindle and worm gear at regular intervals.
- Periodic inspection: Check for wear and damage to cups, arms, and other components.

