Sling Psychrometer

YELLOW JACKET®

This streamlined, compact sling psychrometer measures the wet and dry bulb temperatures of the surrounding air and permits immediate conversion of the readings to relative humidity percentage on the "slide rule" scale which is an integral part of the case.

The "slide rule" indications are accurate to 1% of "Hygrometric Tables". For greater precision, use Bulletin WB 235, available from Supt. of Documents, U. S. Government Printing Office, Washington, D. C. Relative humidity is a ratio of the amount of water vapor in a given volume of air to the amount that would be present if the air were saturated. A sling psychrometer operates on the principle of the evaporation of water from the wet bulb thermometer and the resulting cooling effect on this thermometer.

How to use the 69010 Sling Psychrometer:

1. Pull shaft (A) from the case to the locked position.
2. Remove the thermometer slide (B) from the case and fill the reservoir (C) with clean water saturating the full wick. Close the reservoir cover and snap the slide hook over the extended shaft.
3. Hold the case (as shown) and whirl the thermometer as rapidly as possible (at least two revolutions per second) to effect evaporation around the wet bulb reducing the temperature to its lowest point. A substantial air velocity at the bulbs is necessary to obtain maximum accuracy.
4. When no further reduction in the wet bulb temperature is noted, read first the wet bulb and then the dry bulb temperatures. A minute or more may be needed. The time necessary to bring the wet bulb temperature to its lowest point will vary depending upon the temperature of the water in the reservoir: for minimum delay the water should be at ambient temperature.
5. To read the relative humidity, insert the thermometer slide into the case, scale side up. Set the arrow on the slide at the dry bulb temperature. The relative humidity is then read at the intersection of the RH scale and the wet bulb temperature.

How to maintain your Sling Psychrometer:

1. Keep the slide and shaft fully closed when not in use.
2. Do not expose the instrument to direct sunlight or excessive heat for a prolonged period or damage may result.
3. For best results the wick should be kept clean. When the wick around the bulb becomes dirty, cut this section off and attach a new section from the excess wick in the reservoir. Additional wicks, Part 69011, may be ordered. To replace the wick start it through the opening from outside with a pointed object.
4. Thermometers may be replaced by removing the clamp screws. Avoid over-tightening the screws when setting the clamp.
5. Do not twist the slide or thermometer breakage is possible.
6. During shipment, the liquid may become separated in the bore or a bubble may form in the bulb. To reunite column, remove the thermometer from the plastic slide and immerse the bulb only in a mixture of ice, salt and water or dry ice and alcohol for greater cooling. After liquid has receded into bulb, remove and hold the thermometers in vertical position until liquid has expanded gradually into lower part of bore. If separation persists, repeat procedure.

UPC No.	Description
69010	Sling Psychrometer
69011	Replacement wicks (5 pack)
69015	Replacement thermometer

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