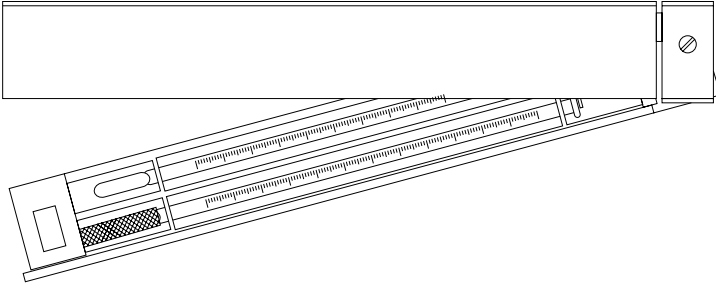


Sling Psychrometer

instructions for use



Principles

The Sling Psychrometer determines %Relative Humidity by measuring the evaporation of water into the surrounding air.

Two thermometers are placed in flowing air, one thermometer bulb being covered by a wet wick. Evaporation from the wetted bulb causes its temperature to be depressed relative to that of the dry bulb.

In dry air evaporation will be rapid and the depression will be greater, giving a low %RH reading.

In humid air there will be little evaporation and the depression will be small, giving a high %RH reading.

If the air is completely saturated no evaporation can take place so both the wet and dry bulb thermometers will give the same reading. This equates to 100%RH.

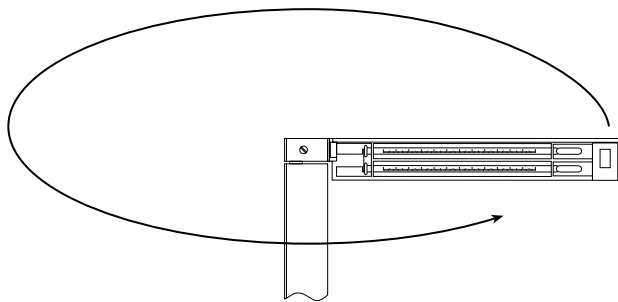
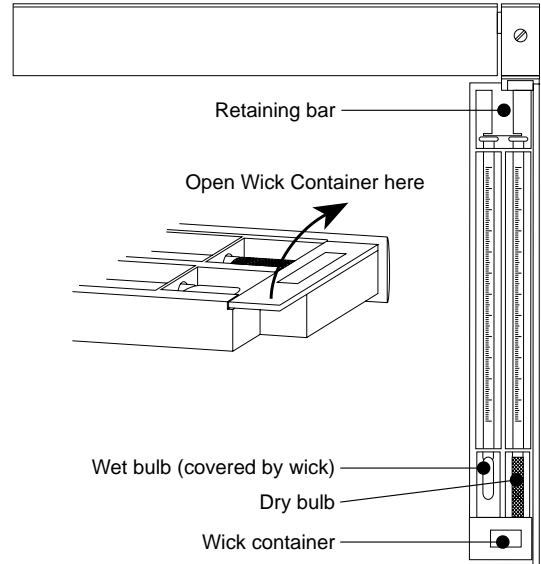
The %RH can be determined using the tables provided.

Taking a reading

① Open the instrument. The frame and tubes are set at right angles to the case, which will act as the handle.

② Thoroughly wet the wick covering the Wet Bulb and the wick in the container by lifting off the container lid and holding the wick container under the cold tap.

Hot water must not be used as it may damage the thermometers.



Replace the lid on the wick container and remove any surplus water from the Dry Bulb area before use. The wick will remain moist for several hours. Always check the wick is wetted before taking any readings .

③ To take a reading set the psychrometer at right angles and, holding the case, rotate the frame for 15 to 20 seconds at between 3 and 3 revolutions per second.

④ Stop revolving the instrument and note the Wet and Dry Bulb temperatures.

⑤ Subtract the Wet Bulb temperature from the Dry Bulb temperature to determine the Depression.

Use the tables provided to compare the Dry Bulb temperature with the Depression and read off the %RH.

Maintenance and spare parts

If the wick becomes worn or dirty it can be cut off and replaced with wick from the wick container. The wick container can be opened and a new length of wick withdrawn.

Broken thermometers can be replaced by lifting the retaining bar at the swivel end of the frame and sliding the tubes away from the bulb.

A Spares Kit comprising two replacement thermometers and a spare length of wick is available for the sling psychrometer. When ordering the spares kit please state whether you require spirit or mercury filled thermometers and whether they should read in °C or °F.

