BAKER INSTRUMENTS

1 YEAR WARRANTY

Model B6040

Sling Psychrometer, Fahrenheit Scale

Instruction Manual

Table of Content

Introduction

Thank you for purchasing your BAKER B6040 Sling Psychrometer. Please read the following instructions carefully before using your instrument. By following the steps outlined in this manual your product will provide years of reliable service.

Safety

Never attempt to repair or modify your instrument. Dismantling your product may cause damage that will not be covered under the manufacturer's warranty. Servicing should only be provided by an authorized service center.

Features

- Foldable design allows for portability
- Durable metal hinge ensures long-lasting use
- Converts wet and dry bulb readings into relative humidity without needing external tables
- Built-in water reservoir holds enough water for several hours of testing
- Thin bulb design provides fast thermal response
- Non-mercury red spirit filled thermometers
- Durable shock-resistant glass thermometers

Included

- Sling Psychrometer
- 2 Thermometers, Fahrenheit Scale
- Wick

Specifications

Temperature

Measuring Range:	25 to 120°F
Accuracy:	± 1 °F
Divisions:	1°F

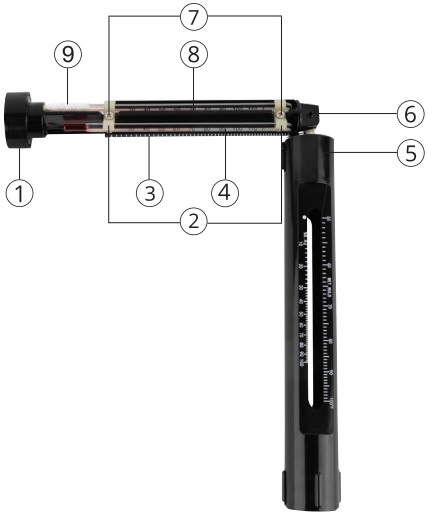
Humidity

Measuring Range:	10 to 100% RH (non-condensing)
Accuracy:	±5% R.H

General Specifications

Dimensions:	7.5 x 1 x 1in (19.0 x 2.5 x 2.5cm)
Weight:	3.10oz (87.88g)

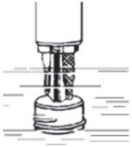
Instrument Description

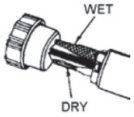


1. End Cap
2. Thermometer Clips
3. Psychrometer Body
4. Dry Bulb Thermomete
5. Tube
6. Roll Pin
7. Screws
8. Wet Bulb Thermometer
9. Wick

Operating Instructions

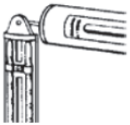
1. Saturating the Wick: To ensure the WICK is thoroughly saturated and properly covers the red spirit reservoir on the WET BULB THERMOMETER, remove the END CAP and immerse the PSYCHROMETER BODY into water, submerging it up to the thermometer reservoirs until the WICK is fully soaked.





2. Filling the End Cap: Fill the END CAP with water and securely replace it, tightening just enough to prevent leaks. Ensure the reservoir on the DRY BULB THERMOMETER remains dry

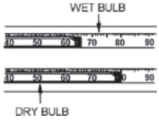
3. Preparing to Whirl: Pull the TUBE away from the BODY to allow the BODY to swivel freely.



continued...

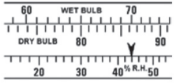
4. Whirling the Psychrometer: While holding the TUBE, spin the BODY at a rate of two to three revolutions per second (approximately 120 to 180 RPM).

5. Stabilizing the Temperature: Continue whirling the psychrometer for approximately 90 seconds or until the temperatures stabilize.
6. Reading the Thermometers: Once stabilized, immediately read the WET BULB THERMOMETER first, followed by the DRY BULB THERMOMETER. Refer to the application notes for guidance.



7. Calculating Relative Humidity: Set the wet and dry bulb temperatures opposite each other on the sliding calculator scale, adjusting the BODY into the TUBE as necessary.

8. Reading Relative Humidity: Read the % Relative Humidity (% R.H.) indicated by the arrowhead on the lower scale of the calculator.



Applications

- Ensure consistent environmental conditions in laboratories
- Track humidity levels in healthcare facilities to maintain safe environments
- Monitor temperature and humidity to maintain product quality and manufacturing conditions
- Safeguard the wellbeing of athletes by measuring environmental conditions during indoor and outdoor activities

Application Notes

Always read the wet-bulb temperature first and as quickly as possible for the highest accuracy. Delays can lead to inaccurate readings.

Keep the WICK clean, fully saturated with water, and whirl the instrument long enough to ensure temperature stabilization.

The psychrometer operates within a range of 10% to 100% Relative humidity (R.H.) for dry-bulb temperatures between 30°F to 100°F.

For higher precision, refer to psychrometric charts or tables such as W.B. No. 235, "Psychrometric Tables for Obtaining the Vapor Pressure, Relative Humidity, and Temperature of Dew Point," available from the U.S. Government Printing Office.

Care and Maintenance

Keep the wick clean. when it becomes dirty, trim the wick just below the wet bulb thermometer, and pull a clean section from the end cap to slide over the wet bulb.

A wick replacement kit is available for purchase (refer to the parts list). Keeping one or two extra wicks, in the end, cap can help retain moisture longer. Ensure the wicks are packed loosely to allow full water saturation and maintain an ample water supply to the wet bulb thermometer.

Thermometers can be replaced by loosening screws and thermometer clips.

To separate the body from the tube, remove the roll pin from the plug and swivel assembly. The assembly can then be slid out from the back of the tube.

Accessories and Replacement Parts

B6041 Spare Thermometer (°F)

B6048 Replacement Wicks (Pack of 6)