

Item Code 72706
Psychrometer E-2

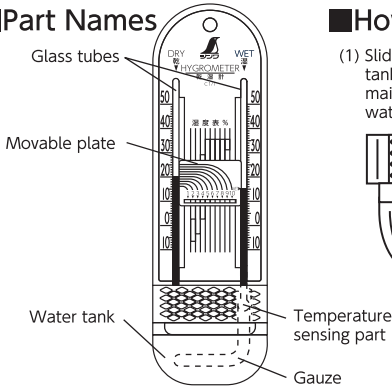
■Use

- For temperature and humidity control at home, in classroom, and office

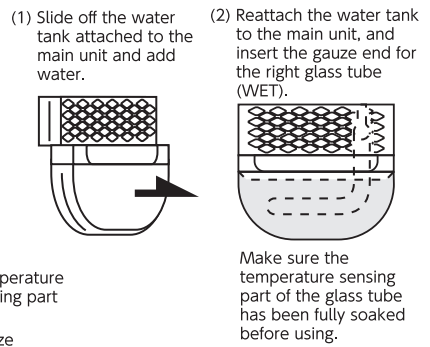
■Features

- Two thermometers are combined to measure humidity by finding difference in temperature between the wet bulb and the dry bulb
- Special lens makes the humidity table easy to read

■Part Names

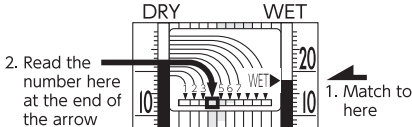
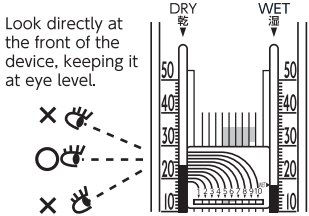


■How to Use

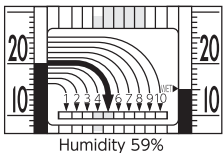


■How to Read Temperature/Humidity

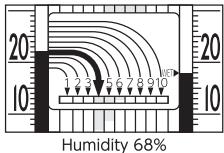
- Temperature - Read the temperature of the glass tube on the left DRY side.
- Humidity---1. Slide the movable plate so that the 'WET ►' mark matches the right-side WET temperature.
2. Find the line on the movable plate that matches the left-side DRY temperature, then read the number in the window at the tip of the line's arrow. This is the current humidity.



Example 1: WET 15 °C / DRY 20 °C



Example 2: WET 18 °C / DRY 22 °C



Tips for Using the E-2 Psychrometer

Humidity	Relative humidity and absolute humidity are different. Relative humidity is the percentage to which the air has been saturated with water vapor at a given time and temperature, assuming that 100% is when the air is fully saturated with water vapor at that temperature. The amount of saturated water vapor changes with temperature. Therefore, even when the amount of water vapor is the same, low humidity (%) occurs when the temperature is high, and high humidity (%) occurs when the temperature is low. This product measures the relative humidity.
Principle	The surface of an object that is wet with water loses heat due to water evaporation, and its temperature becomes lower than that of its surroundings. The degree to which the temperature decreases depends on air temperature, humidity, and barometric pressure, etc. When the atmospheric pressure is within normal atmospheric pressure fluctuations and ambient conditions such as airflow and radiant heat are kept constant, the humidity is obtained from the value on the thermometer indicating the temperature of the temperature-sensitive part covered with gauze, and value on the thermometer indicating the air temperature.

⚠ Caution

- Do not use other than as intended.
- Before measuring temperature, check for insufficient liquid or cracks in the glass tubes.
- The device will not indicate an accurate display while packaged. Be sure to remove it from the packaging before using.
- See the Specifications section for the accuracy of this thermometer. Please purchase a precision thermometer/hygrometer for temperature/humidity management requiring greater precision.
- This thermometer is made for measuring air/room temperature. Please purchase a special thermometer for measuring the temperature of liquids such as water.
- Please note that the temperature may not be accurate in places subject to direct sunlight, radiant heat, cold air, hot air, and steam, etc.
- Storing the product in a horizontal position may cause damage or the liquid to run out.
- Do not handle roughly as dropping or subjecting to strong impact may cause malfunction.
- Do not use or store at a temperature beyond the measurement range. The glass tube may burst.
- If a glass tube breaks and red liquid (dyed refined kerosene) leaks out:
 - ・Contact with skin → Wash well with soap.
 - ・Red liquid → Absorb with tissue paper and then incinerate.
 - ・Glass tube → Treat as incombustible waste.
 - ・Contact with eyes → Wash with water until irritation stops. See a doctor if irritation persists.
- The glass thermometer tubes are marked at 0°C to indicate correct temperature. If the device is dropped or experiences strong vibration, check that the marks on the scales and the glass tubes are aligned at 0°C, or that the liquid has not run out.
- Do not use in a confined space where water evaporating from the wet bulb may affect humidity at the measurement location.
- Do not use in an environment that is significantly contaminated with gas or dust, etc.
- Even a slight error in the temperature difference between the dry bulb and the wet bulb will cause a considerable error in humidity. Please note that such errors are especially noticeable at low temperature and low humidity.
- The wet bulb may dry out quickly at high temperatures and low humidity, so make sure to keep it wet.
- Scale may form on the temperature sensing part of the wet bulb after significant use, so be sure to wash off the scale.
- Replace the gauze if it becomes dirty or stiff. When replacing the new gauze, use a 100% cotton gauze that has not been starched.
- When wrapping the wet bulb, use a single layer of gauze and be careful to avoid wrinkling. Wetting the gauze with water first makes it easier to wrap.
- Make sure there is no gap between the gauze and the temperature sensing part.
- When handling the gauze, be careful to keep it free of contamination such as from oil or dust.
- Always keep the water tank filled with water. Humidity cannot be measured without water in the tank.
- When measuring humidity, use within a temperature range of 0-40°C.
- We shall not be liable for any consequential, incidental, or indirect damages such as losses and lost profits to the customer as well as a third party resulting from the operation of this product, regardless of whether or not they were foreseeable or the possibility was reasonably foreseeable. However, this shall not apply in the case where there is willful or gross negligence or when the customer is a consumer according to the Consumer Contract Act. In the event that we are liable for the use of this product, we shall be liable for damages limited to an amount equal to the price of the product.

■Specifications

Accuracy	Temperature: ±1°C Humidity: ±10%
Measuring Range	Temperature: -10 - 50°C Humidity: 10 - 94%
Each Graduation	Temperature: 1°C Humidity: —
Material	Body: Polystyrene resin Movable Plate, Water Tank: AS resin Thermometric Fluid: Dyed refined kerosene
Body Size	285 × 84 × 26 mm
Gauze Dimensions	Approx. 30 × 110 mm
Weigh	100 g

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