

Psychrometers: Assmann & Battery Operated, Psychrometric Slide Rule

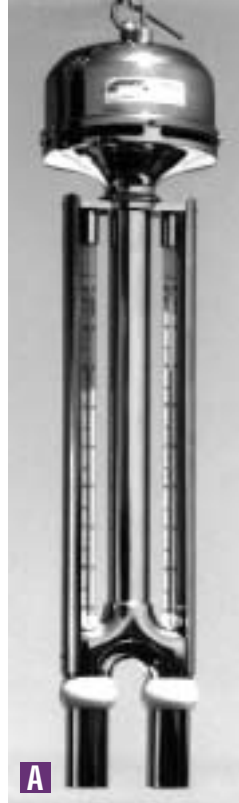
A. Assmann Psychrometer

Description

The Assmann psychrometer utilizes two precision mercury thermometers with 3-point calibrations. A certificate is provided with each thermometer, giving the correction required at each point. Corrected accuracy is better than $\pm 0.1^{\circ}\text{C}$. The double-tube thermometers are supported and protected by a chrome-plated brass case. The thermometer bulbs are guarded by double-walled radiation shields thermally isolated from the main housing by a plastic bushing. Aspiration of the bulbs is accomplished by a springwound fan which will provide 8 minutes of aspiration per winding.

Two models are available

The Model 5230 measures over a range of -30° to 50°C ; the thermometer graduations are 0.2° . The Model 5231 has a range of -20° to 130°F with graduations of 0.5° . Each instrument is supplied with a wind shield, a mounting support, a



A

syringe to moisten the wet-bulb wick, extra wicks, psychrometric tables, and a sturdy carrying case.

B. Battery Operated Psychrometer

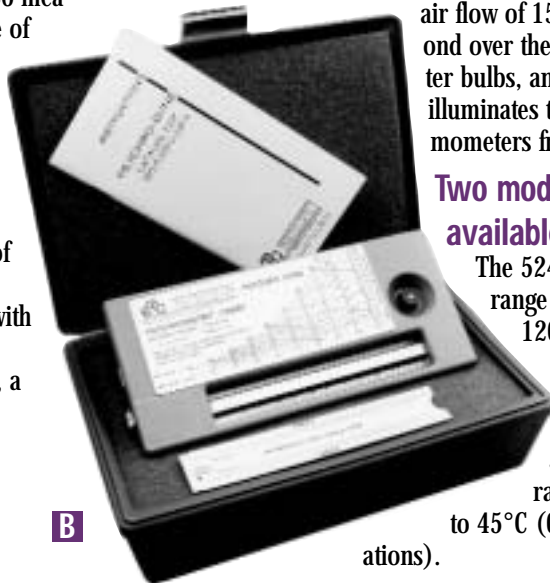
Description

The battery operated psychrometer quickly and easily measures wet-bulb and dry-bulb temperatures. These can be converted into relative humidity or dew point temperature using either a chart on the instrument face, a psychrometric slide rule (provided), or tables (also provided) for a more accurate determination.

The instrument is self-contained and portable. It is small enough to be handheld, but it has an opening on the rear of the case for wall mounting if required. Three D-cell batteries will provide power for up to 1,000 observations. The small fan creates an air flow of 15 feet/second over the thermometer bulbs, and a lamp illuminates the thermometers from behind.

Two models are available

The 5245 with a range of 10° to 120°F (1° graduations) and the 5246 with a range of -15° to 45°C (0.5° graduations).



B

C. Circular Psychrometric Slide Rule



C

Description

The Model 5281 circular psychrometric slide rule can be used to calculate both dew point temperature and relative humidity from wet-bulb and dry-bulb temperature readings. Easy-to-follow instructions are printed on the face of the slide rule, which is constructed of sturdy plastic. The slide rule can accommodate wet-bulb temperatures from -60° to 85°F and dry-bulb temperatures from -60 to 120°F . One side of the slide rule is used for calculations in the lower part of the temperature range, and the other side is used in the higher part of the range, greatly increasing the resolution of the calculations.

The Model 5282 is the metric version of Model 5281 and accommodates wet-bulb temperatures from $-^{\circ}\text{C}$ to 30°C and dry-bulb temperatures from $-^{\circ}\text{C}$ to 49°C .

Specifications

Assmann Psychrometer

Size: 4" dia. x 16" L (100 x 405 mm)
Weight/shipping: 3 lbs/10 lbs (1.4 kg/4.5 kg)

Battery Operated Psychrometer

Size: 10" W x 4.5" D x 2" H (254 x 114 x 51 mm)
Weight/shipping: 1.25 lbs/3.5 lbs (0.6 kg/1.6 kg)

Circular Psychrometric Slide Rule

Size: 11.2" dia. x 0.8" D (284 X 20 mm)
Weight/shipping: 11 oz/4 lbs (0.3 kg/1.8 kg)

Ordering Information

Assmann Psychrometer

5230	Assmann Psychrometer, -30° to 50°C range; includes accessories and carrying case
5231	Assmann Psychrometer: -20° to 130°F range; includes accessories and carrying case
52301	Spare thermometer for 5230, with calibration certificate
52311	Spare thermometer for 5231, with calibration certificate
52302	Wick material, 12-inch length
M488053	Spare parts kit for 5230

Battery Operated Psychrometer

5245	Battery-operated Psychrometer, 10° to 120°F range; includes carrying case, water bottle, psychrometric slide rule, RH tables extra wicking, and spare light bulb.
5246	Battery Operated Psychrometer, -15° to 45° C range; accessories as above
52451	Spare thermometer for 5245
52461	Spare thermometer for 5246

Circular Psychrometric Slide Rule

5281	Circular Psychrometric Slide Rule, wet-bulb temperature range from -60° to 85°F and dry-bulb temperatures from -60 to 120° F
5282	Circular Psychrometric Slide Rule, wet-bulb temperature range from -51°C to 30°C and dry-bulb temperatures from -51°C to 49° C.