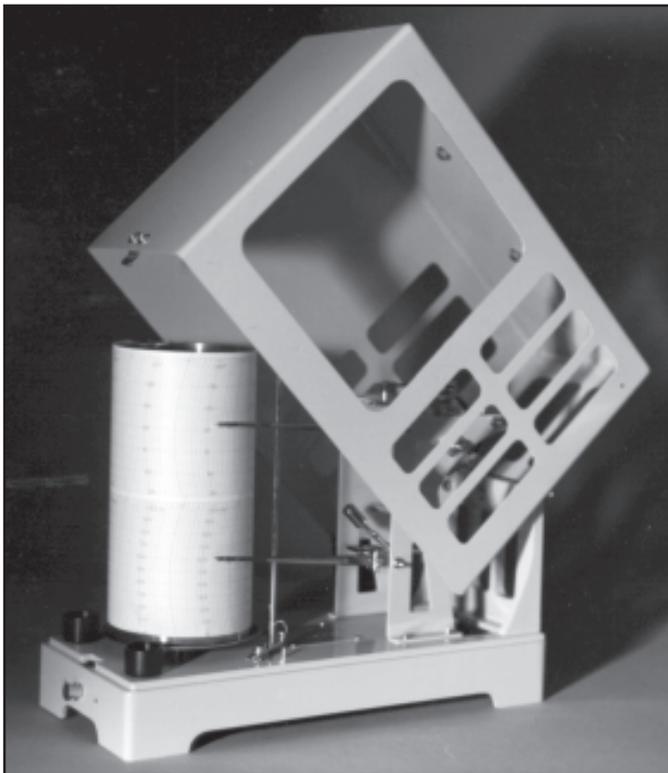


225-5020-A Hygrothermograph



The **Model 225-5020-A Hygrothermograph** is a precision, self-contained instrument that measures and records ambient temperature and relative humidity simultaneously on a double scale chart. It is ideal for measurements in laboratories, computer rooms, libraries, museums, or agricultural areas.

The hygrothermograph employs an aged bimetal strip which distorts with changes in temperature. This distortion is magnified through a lever system which moves a pen arm over the upper half of a 7" high chart. The response is linear. Temperature is recorded over a 60°C or 110°F span. The span can be adjusted up or down to match the temperature range of the installation site. Corresponding charts are available. Normal calibration adjustments are made by turning a knurled knob which moves the pen up or down the scale through movements of the lever system.

A specially treated bundle of human hair is used to measure relative humidity over the full range of 0-100%. The hair expands and contracts with increasing or decreasing water vapor in the air. This movement is transmitted to the pen arm using a linkage system. Opposing quadrants in the linkage linearize the nonlinear response of the hair bundle.

The chart is installed on a self-contained, battery-operated clock. The drum rotation may be selected as 1 day (26 hours), 7 days (176 hours), or 31 days. Internal parts of the hygrothermograph are chrome plated brass. Pivots are polished instrument-grade stainless steel for fast response. The base of the case is cast aluminum. Large openings in the sides, end, and bottom permit free flow of ambient air to the sensors. A glass window in the hinged cover makes chart reading easy. Recording is accomplished using reliable, replaceable cartridge pens. When the hygrothermograph is used outdoors, it must be protected from direct solar radiation by installing it in an instrument shelter.

Specifications

Measurements: Temperature and Humidity

Temperature Sensor: Aged Bimetal Strip

Span: 60°C, 110°F (adjustable)

Accuracy: ±1%

Graduations: 1°C, 2°F

Humidity Sensor: Hair Bundle

Range: 0-100% RH

Accuracy: ±1% mid-scale, ±3% extremes

Graduations: 1%

Chart size: 7" H x 11" L (178 mm x 280 mm)

Clock type: 1.5 Vdc battery-operated (2 AA cells)

Drum rotation: 1 day (26 hrs), 7 days (176 hrs), or 31 days, switch selectable

Pen type: Cartridge

Size: 12.5" L x 11.5" H x 6" D (318 mm x 292 mm x 152 mm)

Weight/shipping: 10 lbs/16 lbs (4.5 kg/7.3 kg)

Ordering Information

225-5020-A	Hygrothermograph with battery-operated 1-7-31 day clock, two pens, and one pack of weekly or monthly charts (specify charts)
225-50211	Replacement Hair Bundle
390-8827-A	Replacement Clock
390-88101	Replacement Cartridge Pen, blue ink
390-88102	Replacement Cartridge Pen, red ink
225-5020-GL	Replacement Plexiglass Window (T950114)

Charts	Range	Drum Rotation	Charts/Box
225-50201	-20 to +40°C, 0-100%	7 days	55
225-50202	+10 to +120°F, 0-100%	7 days	55
225-50203	-30 to +80°F, 0-100%	7 days	55
225-50204	-20 to +40°C, 0-100%	1 day	400
225-50205	+10 to +120°F, 0-100%	1 day	400
225-50206	-30 to +80°F, 0-100%	1 day	400
225-50207	-20 to +40°C, 0-100%	31 days	25
225-50208	+10 to +120°F, 0-100%	31 days	25
225-50209	-30 to +80°F, 0-100%	31 days	25
225-50212	-10 to +50°C, 0-100%	7 days	55
225-50213	-5 to +55°C, 0-100%	31 days	25
225-50214	-10 to +50°C, 0-100%	1 day	400
390-M699120	-10 to +50°C, 0-100%	31 days	25