

### Automatic paper expansion meter

Dimensional changes when exposed to relative humidity fluctuations. The machine is able to provide various atmospheres of relative humidity where the specimen is subject to water content fluctuation, with a dial gauge showing expansion amount.

Paper sheets, when affected by water, undergo dimensional changes. This factor is very important when using paper. Multi-color printing papers and map papers need to be highly stable in size even subject to water.

This machine is designed to measure dimensional changes along with relative humidity fluctuation. There is a range of possibilities; the expansion of paper is detected and digitally displayed under various conditions, with various temperatures inside the system, atmospheres of various degrees of relative humidity, different water contents of specimen.

In the case of the conventional measurement procedure, there is a dial gauge inside, so humidity sticks to the gauge shaft, causing precision problems. To solve this problem, the measurement section is positioned outside with a computer to automatically record temperature, humidity and expansion.

#### Expansion measurement section:

**Specimen:** up to 50 mm wide, 50, 100, 150, 200, 250, 300 mm long, six specimens mountable

**Expansion:** 0 to 5 mm, 1/100 mm increment

**Weights:** 5, 10, 20, 30, 50 g

A weight of one-half the basis weight of 50 mm width

**Measurement data:** dry-bulb and wet-bulb temperatures, 6-channel expansion meter with digital display

#### Constant temperature constant humidity oven:

**Temperature range:** -20°C to 100 °C

(depending on environment)

**Humidity range:** 25 % RH to 95 % RH, see the separate table for detail.

**Temperature variation:**  $\pm 0.5^\circ\text{C}$  (except when step is switched and during gradient operation)

**Humidity variation:**  $\pm 3\%$  (except when step is switched and during gradient operation)

**Referential standards:** ISO 8226, J.TAPPI No.28, SCAN P-28

**Power source:** three-phase 200/220 VAC 50/60 Hz 20 A

**Inner dimensions:** 1000×600×700 mm

**Outer dimensions:** 1600×1060×1515 mm  
overall height including the measurement section: about 2000 mm

**Instrument weight:** 625 kg

The part marked with  represent the range of humidity setting.

· The humidity operation limit slightly varies with ambient condition.



No. 2078

※ Represent the humidity setting

