



HUMBOLDT

H-2680 & H-2682— Maturity Meters

Maturity Testing Benefits (ASTM C1074)

Open pavements to traffic faster | Safely strip forms sooner | End reliance on field-cured test cylinders | Improve jobsite safety
 Monitor in-place temperatures to ensure proper curing | Terminate external heating sooner
 Speeds production by at least a day per pour on structural projects and more on pavement projects

Simple, Reliable Design



H-2682

Humboldt Maturity Meters provide a predictable strength determination of cast-in-place concrete based on ASTM Standard C1074-98 (Estimating Concrete Strength by the Maturity Meter Method). These units utilize inexpensive, disposable, T-type thermocouple wire with quick-connect jacks, which can be embedded directly into a concrete structure to measure temperature at timed intervals.

These readings can then be used to document the maturity process within the structure in order to:

- predict the time for form and shoring removal;
- estimate loading and post-tensioning time;
- control winter heating/insulation requirements, and
- reduce construction time and costs through accurate maturity readings.

The H-2680 and H-2682 are four-channel models, which provide the maturity number calculation, instant readout and temperature history on a menu-driven alphanumeric display. A communications port allows information to be transferred from the meter to another meter, printer or computer. The H-2682 provides the use of a rechargeable nickel-cadmium battery, which can be used to enhance performance in cold weather applications.

H-2680 & H-2682— Maturity Meters

Specifications Meet ASTM Standards: C1074 and C198

Thermocouple Wire: Type T (Omega "flat pin" miniature)
Sensor Measurement Range ($\pm 1^{\circ}\text{C}$): -10°C to 90°C
Unit Environmental Range ($\pm 1^{\circ}\text{C}$): -10°C to 60°C

Data Record:

Memory Capacity: 32K
Data Capacity: 10 months x 4 channels
Recording Interval: Every 1/2-hr. to 48 hrs., then every hr.

Power (Battery):

H-2680 9V Lithium (U9VL) or Alkaline Transistor-type
H-2682 9.6V NiCad with recharger or AC

Enclosure:

Case Materials: Impact and Splash Resistant Polycarbonate
Dimensions: 7.8"(20cm) x 4.7"(12cm) x 2.9"(7cm)
Weight: 1.75 lbs (.8Kg)

Communications:

I/O Port Serial RS-232C
Handshaking XON/XOFF
Data Format ASCII
Baud Rates Up to 9600 –selectable

Maturity Value Calculations:

Constant Programmable Range
Datum Temperature: -20°C to 40°C
Equivalent Age Temperature: 0°C to -40°C
Activation Energy Constant: 0°K to $2 \times 1040\text{K}$
Maximum Maturity Values Displayed:
Temperature/Time Factor: 99999 $^{\circ}\text{C}$ hours
Equivalent Age Factor: 9999 hours

Specifications may change without notice

Ordering Information:

H-2680— Multi-channel Maturity Meter Set

Includes:
(4) Type-T thermocouple wire and connectors
RS-232 communications cable
Plastic carrying case and user manual

H-2682— Rechargeable Multi-channel

Maturity Meter Set,
Includes: all the above, and comes with a rechargeable nickel-cadmium battery and a 120V battery charger/AC adapter

Accessories

H-2670.1— Thermocouple wire, 24 gauge, sold per foot (std.)
H-2670.IT— Thermocouple wire, 20 gauge, sold per foot (heavy-duty)
H-2680P— Plug for thermocouple wire to meter
H-2684— Printer (Serial Port, Epson LX300, with H-2685 cable)
H-2682BP— 9.6V Rechargeable Ni-cad Battery Pack
H-2686— Maturity meter to PC serial cable, 9-pin
H-2685— Maturity meter to printer serial cable, 25-pin
H-2680B— 9V Lithium battery



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