



Freeze-Thaw Cabinet

The Freeze-Thaw Cabinet is used to measure the resistance of concrete to deterioration caused by repeated cycles of freezing and thawing. The Freeze-Thaw is designed to test up to eighteen 3"x4"x16" concrete specimens simultaneously with one being the control.

The touch-screen controller provides full, graphical monitoring of all testing functions in a stand-alone application. The 7in, waterproof screen provides at-a-glance monitoring of testing functions in a real-time graph display. With its stand-alone process it gives you the ability to run tests and display results while viewing tabulation, basic x-y graphs and temperature readings in real-time during the test. The test data is stored in the device and can be downloaded to a USB drive.

Features:

- Fully automatic operation frees operator to perform other lab duties.
- Allows users to establish field control using correlations between concrete strength and durability
- Permits the evaluation of variables in concrete properties and conditioning.
- Useful in evaluation of the durability of aggregates, as well the properties of admixtures.



HC-3186S Freeze-Thaw

- User-created test control, for changing freeze time, minimum temperature, maximum temperature and the number of cycles desired.
- Real-time, on-screen control and monitoring with graphing.
- Test data can be reviewed after a test is completed, which includes tabulation and graph views.
- Touch-screen interface for easy navigation.
- Complete report generation from with the Humboldt NEXT software. Test data can also be exported to computers via a network or thumb drive.
- Remote control and monitoring via network and internet.

You can have up to eight freeze-thaw cycles within a 24-hour period. The exact number of cycles is dependent upon the time required for the temperature at the center of the control prism to fall from 40° to 0°F and then back to 40°F. The temperature at the center of the control specimen is controlled with a 0.75HP refrigeration unit and electric resistance heaters that have fully automatic controls.

The current temperature of the control specimen can be checked on the 7" color display on the controller. You can also track the temperature of freeze-thaw cycles in a real-time on the display. The graphs and tabular data can be used to create reports of tests within the Humboldt NEXT software or by downloading to other computers for reports.

The HC-3186S Freeze-Thaw features a stainless steel, 84"L x 32"W x 35.75"H cabinet constructions with 3" insulation on all sides creating corrosion resistance and long service life.

The internal test compartment measures 74"x26"x6". A 30-amp circuit is required for operation.

Controller Specifications:

- Display 7" - (178mm) VGA (480 x 800) Resistive-touch screen
- Real-time test data - Graphic and tabulation
- Processor - Dual 32-bit ARM
- RAM - 64MB
- Memory, non-volatile - 4GB
- Data acquisition - 1
- Channel Logging speed - 1 reading every 5 minutes
- Multi-test storage - 1000
- Points per test - 3000
- USB port - used to export data via thumb drive
- Ethernet connection - for network connectivity
- Firmware Update - Ethernet or flash drive

Specifications:

- Condenser Operating Temperature Range - -30°F to 45°F (-34°C to 7°C) evap (R-404A)
- Data channels - 1
- Data storage - 1000 tests and up to 3000 readings per test