

TEST & MEASUREMENT

# CONCRETE SOLUTIONS GUIDE

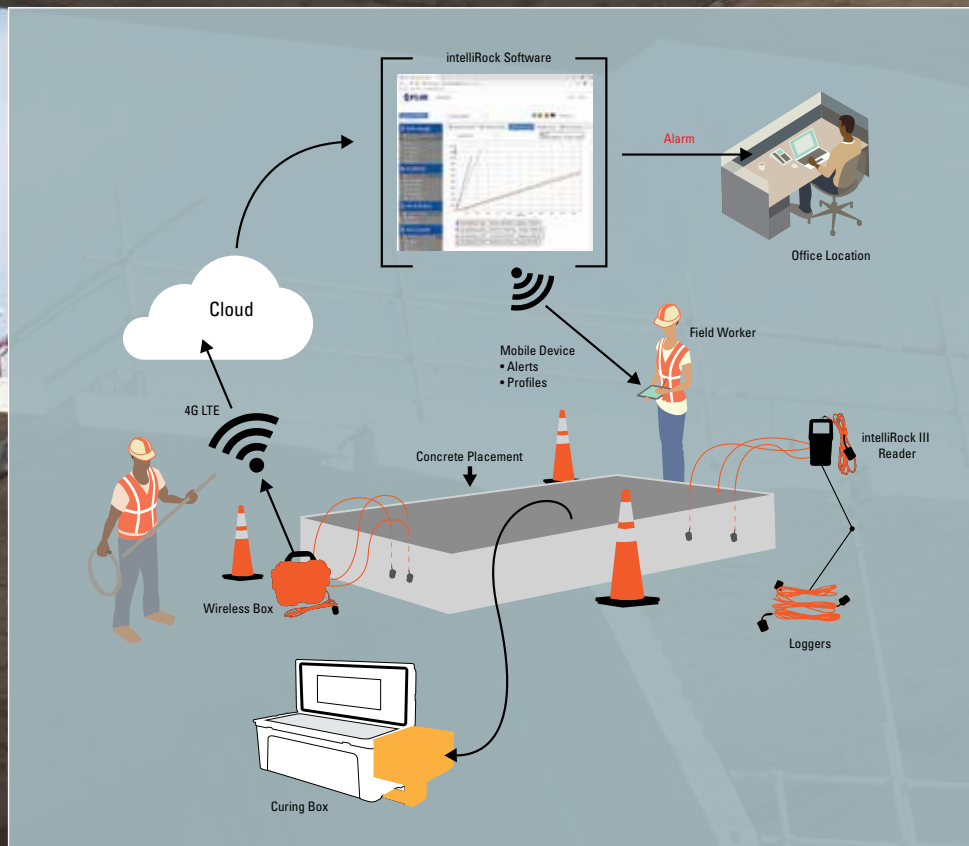
FASTER, SAFER CONCRETE





# SAVE TIME. SAVE MONEY. ENSURE QUALITY.

Increase productivity and reduce project costs with FLIR IntelliRock, IntelliCure, and EZ Cure products. These innovative new technologies give you the tools you need to build today's structures quickly, economically, and safely, while easily meeting tough specifications.



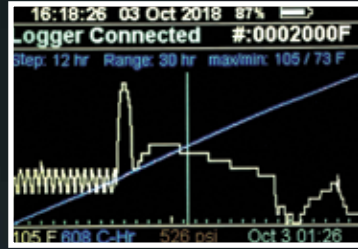
# INTELLIROCK III CONCRETE STRENGTH AND TEMPERATURE PROFILING

## COMPLETE PROJECTS AHEAD OF TIME, UNDER BUDGET, AND MEET SPECIFICATION REQUIREMENTS

intelliRock III is the only system available to retain secure, uninterrupted, and unalterable data. It's packed with tools such as multiple mix design access, various alerts, and an infrared camera for temperature measurement and heat profiling. Report and review critical data from a computer or mobile device via secure cloud-based software.

## KEY BENEFITS

- Build faster, strip forms earlier, and optimize post-tension work
- Reduce equipment rental, cement, and labor costs with maturity data
- Meet strict temperature monitoring requirements and avoid thermal issues
- Have peace of mind knowing that you can continuously monitor concrete performance offsite
- Identify surface temperature issues and monitor insulation performance

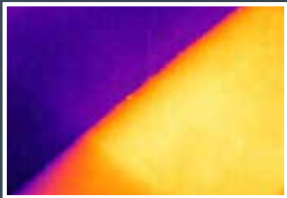


Create comprehensive graphs with temperature, strength, and max/min information

Unalterable, uninterrupted data integrity

View real-time data

Visually monitor the curing process with the built-in 160 x 120 FLIR Lepton® thermal imager



# INTELLIROCK TEMPERATURE LOGGERS

## IDEAL FOR COLD WEATHER AND MASS POURS

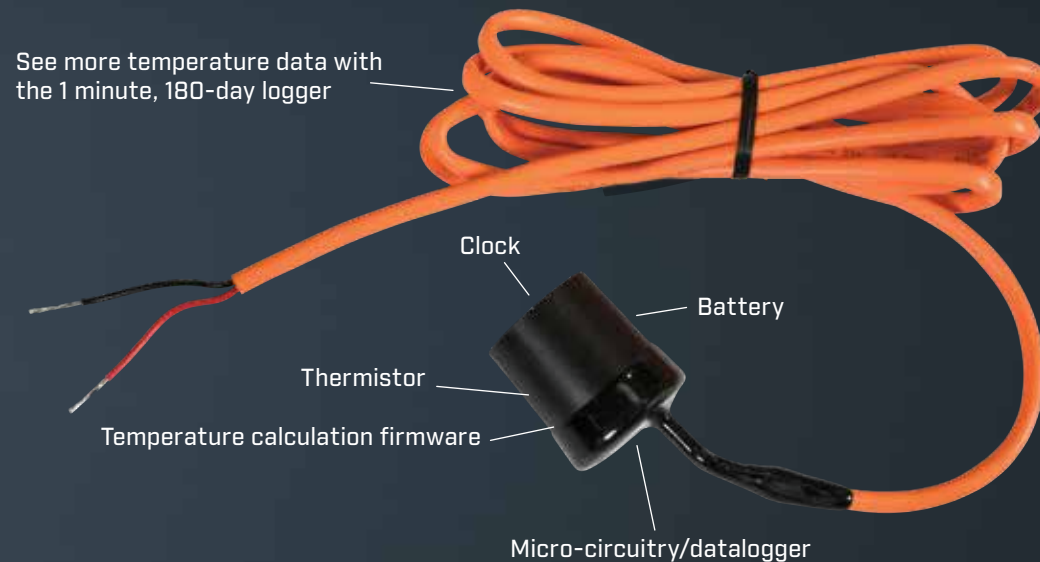
Measures and documents the temperature profiles and gradients of in-place concrete in real time.

### KEY BENEFITS

- Measure and document temperature profiles and regulate thermal protection
- Monitor optimal temperature differentials using real-time temperature information
- Ensure adherence to temperature specifications by logging max/min temperatures for any construction application
- Expand construction calendar and provide effective management of fuel cost in cold weather
- Have peace of mind when offsite, with reassurance that temperatures meet required specifications
- See more data: the logger measures and stores temperature information every minute for 180 days

“This has saved me a great deal of time and effort. I am able to monitor mass concrete temperatures from my office without climbing forms during the winter months.”

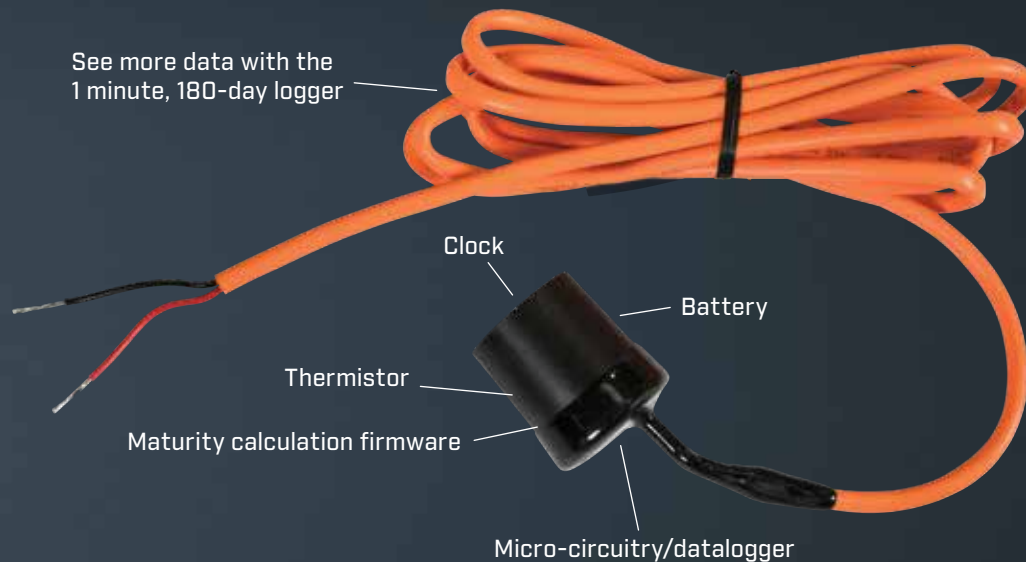
-Victor Foti, Quality Control Manager, Middlesex Corporation



# INTELLIROCK MATURITY LOGGERS

“Concrete maturity loggers are accurate, efficient, and easy to use. They helped us expedite our schedule by decreasing our cure time by showing sufficient strength earlier than our seven-day cylinder break.”

-Caleb M., Project Manager, AUI, Inc.



## ACCELERATE WORKFLOW, ENSURE QUALITY

Analyze the time and temperature profile of in-place concrete to calculate its strength in real time with just the press of a button.

### KEY BENEFITS

- Speed up concrete operations and extend the construction calendar in cooler weather
- Document early strength and temperature information
- Improve quality control with early validation of batching consistency
- Decrease labor and material costs
- See more data: the logger stores the current maturity value every minute for 180 days

# INTELLIROCK WIRELESS CONCRETE CURING

## SEND CRITICAL INFORMATION STRAIGHT TO YOUR DESKTOP

Connect IntelliRock maturity or temperature loggers to a wireless remote radio box to access data directly from your computer or mobile device via LTE 4G communication.

### KEY BENEFITS

- Conveniently send data from IntelliRock loggers directly to the IntelliRock Cloud Software – straight from concrete placement
- Use where safety or accessibility is an issue
- Communicate with loggers from anywhere with LTE service





# INTELLIROCK SOFTWARE

VIEW REAL-TIME DATA AND  
STRENGTHS ON A MOBILE  
DEVICE OR COMPUTER

Send logger data directly to this secure cloud-based software via cellular LTE 4G communication so you can share data and create reports and alerts easily.

## KEY BENEFITS

- Access the latest strength and temperature data from any location
- Avoid quality issues by taking corrective action early using differential alerts
- Keep others informed by sending reports and alerts via email
- Adjust comparison points of multiple loggers that concrete hits at variable times by lining up the start times with the sliding-scale feature
- See more data: the intelliRock loggers store temperature and the current maturity value every minute for 180 days



# INTELLICURE CONCRETE CYLINDER CURING SYSTEM

## THE INDUSTRY'S ULTIMATE CURING SOLUTION

Heats and cools to maintain a constant, adjustable curing temperature for both the initial cure and the full 28-day cycle.

### KEY BENEFITS

- Eliminate temperature stratification with patented "Bubble Plume" technology that actively stirs the water
- Maintain a preset temperature for the entire curing cycle, as IntelliCure automatically heats or cools to ensure a consistent curing environment
- Trust in the curing system accuracy, which is certified accurate to  $\pm 1^{\circ}\text{F}$  using a NIST traceable standard
- Protect your investment and ensure safe operation with the minimum-fill float switch
- Available in multiple sizes: mini, standard, and mega





# INTELLICURE MATCH

## CONCRETE CYLINDER CURING SYSTEM

### NEXT-GENERATION CONCRETE CYLINDER CURING

Heats and cools to maintain a constant, adjustable curing temperature for both the initial cure and the full 28-day cycle.

#### KEY BENEFITS

- Build faster with accurate apples-to-apples destructive samples
- Eliminate mix design headaches – no calibration curve necessary
- Get immediate PSI information for critical placement locations
- Verify the accuracy of maturity values by validating with match-cured specimens



# EZ CURE II

## THERMOSTATIC CONTROLLED CURING BOX

“The EZ Cure box provides proper initial cylinder curing, which eliminates the argument of improper curing when low strength results occur.”

-Paul Nordlund, Inspector, CTC-GeoTek



### IDEAL FOR THE FIRST 24 TO 48 HOURS OF CURING

A simple and economical field-curing solution that heats and cools as needed to maintain a constant 22.8°C (73°F) curing environment. Meets ASTM C31 curing requirements for job sites on a tight budget.

### KEY BENEFITS

- Meet specifications by maintaining a stable 16 to 27°C (60 to 80°F) curing environment
- Easily access samples and maximize capacity with the included cylinder rack – holds 24 (6 x 12) or 52 (4 x 8) cylinders
- Reduce temperature stratification with three built-in fans for circulation
- Move the box easily via forklift using the built-in fork channels

# TECHNICAL SPECIFICATIONS

GENERAL LOGGER		intelliRock III
Operating Temperature		-20° to 99°C (4° to 210.2°F)
Max Storage Time & Temperature		85°C (185°F) for 5 years
Max Temperature Measurement Range		-20° to 125°C (4° to 257°F) (unwarranted outside of "operating temperature" range)
Temperature Accuracy		-20° to 80°C (4° to 176°F), ±2°C, 80° to 99°C (176° to 210.2°F)
Temperature Resolution		1°C (1.8°F)
Time Accuracy		1 minute per month
Temperature Measurement Rate		1 minute (resolution for min/max)
Maturity Integration Period		1 minute
DATA LOGGING		
Time		Yes
Temperature		Yes
Maturity		Yes
Events		6+ max and min temperature
Notes		8+ job site name and logger location
LOGGER MODEL-SPECIFIC INFO		
Type of Logger		Temperature Only or Maturity
Available Cable Lengths		4, 8, 15, 30, 50, or 100 ft
INTELLIROCK III READER		
General Reader Operating Temperature Only or Maturity		-5° to 50°C (23° to 122°F)
Time Accuracy		1 minute per month
Logger Data Storage		999 logger downloads
Calibration Curves		Holds 5 calibration curves for strength conversions
PC Interface		USB and Bluetooth®
Camera		160 x 120 thermal camera

MODEL	EZ Cure II	intelliCure Mini	intelliCure Standard	intelliCure Mega	intelliCure Match
Cylinder Capacity	26- 15.2 x 30.5 cm (6 x 12 in) cylinders 79- 10.2 x 20.3 cm (4 x 8 in) cylinders	12- 15.2 x 30.5 cm (6 x 12 in) cylinders 27- 10.2 x 20.3 cm (4 x 8 in) cylinders	16- 15.2 x 30.5 cm (6 x 12 in) cylinders 40- 10.2 x 20.3 cm (4 x 8 in) cylinders	24- 15.2 x 30.5 cm (6 x 12 in) cylinders 104- 10.2 x 20.3 cm (4 x 8 in) cylinders	12 to 24- 15.2 x 30.5 cm (6 x 12 in) cylinders or 27 to 104- 10.2 x 20.3 cm (4 x 8 in) cylinders
Exterior Dimensions (L x W x H)	155 x 76.2 x 89 cm (61 x 30 x 35 in)	157.5 x 50.8 x 53.3 cm (62 x 20 x 21 in)	182.9 x 61 x 55.9 cm (72 x 24 x 22 in)	203.2 x 61 x 61 cm (80 x 24 x 24 in)	157.5 x 50.8 x 53.3 cm (62 x 20 x 21 in) 182.9 x 61 x 55.9 cm (72 x 24 x 22 in) 203.2 x 61 x 61 cm (80 x 24 x 24 in)
Interior Dimensions	127 x 55.9 x 63.5 cm (50 x 22 x 25 in)	99.1 x 35.6 x 38.1 cm (39 x 14 x 15 in)	124.5 x 43.2 x 38.1 cm (49 x 17 x 15 in)	144.8 x 48.3 x 43.2 cm (57 x 19 x 17 in)	99.1 x 35.6 x 38.1 cm (39 x 14 x 15 in) 124.5 x 43.2 x 38.1 cm (49 x 17 x 15 in) 144.8 x 48.3 x 43.2 cm (57 x 19 x 17 in)
Weight	106.6 kg (235 lb)	54.4 kg (120 lb)	61.2 kg (135 lb)	68 kg (150 lb)	56.7 to 70.3 kg (125 to 155 lb)
Power	110 V / 60 Hz, dedicated 15 A circuit	120 V / 60 Hz, dedicated 20 A circuit	120 V / 60 Hz, dedicated 20 A circuit	120 V / 60 Hz, dedicated 20 A circuit	120 V / 60 Hz, dedicated 30 A circuit



LEARN MORE ABOUT FLIR CONCRETE SOLUTIONS AT [WWW.FLIR.COM/CONCRETE](http://WWW.FLIR.COM/CONCRETE)

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