C-PROBE TECHNOLOGIES
Concreting with Confidence

Product brochure 2026

Know Your Concrete · CP-CMMS maturity meter system

Know the strength of every pour, in place.

India's indigenous, patented maturity meter system. Sensors cast into the concrete report in-place strength live, so formwork, stressing and curing decisions run on data instead of waiting for cube results.

- ASTM C1074 maturity method
- Live on app and web
- Made in India

Why measure in place

Engineering certainty, eliminating guesswork.

Cube tests are slow, labour-intensive and open to manipulation. CP-CMMS measures the concrete itself, in place and continuously, from fresh to hardened state.

50%+
fewer cube tests

10%+
construction time saved

200+
reuses per meter and sensor

33+
projects since 2021

Two ways to decide when to strip

Cube testing Sampled, days later	Cast cubes	Cure in tank	Crush at 3, 7, 28 days	Decide	Days of waiting
CP-CMMS In place, live	Sensor in the pour	Live strength on app	Target reached	Decide	**Hours, not days**

Faster cycles
Strip, stress and pour next on measured strength, not a calendar.

Half the cube tests
At least 50% fewer cubes. Precast running cost ₹30–40 per m^3 over two years.

Tamper-proof record
Time-stamped from sensor to cloud. Stands up in an audit.

Greener testing
Fewer cubes and curing tanks: less water, less waste, lower carbon.

Live on any device
Strength and temperature on app and web, wherever you are.

Low skill to run
Site teams run it after one training, with on-site and online support.

One system for every critical decision

- De-shuttering
- Pre- and post-tensioning
- Lifting precast
- Curing control
- Opening to traffic
- Mass concrete
- Cycle planning
- Corrective action

How CP-CMMS works

From sensor to decision.

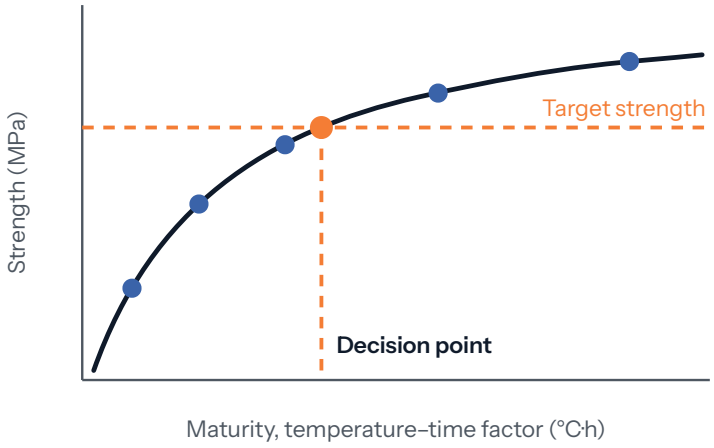
Digital sensors
Cast in the pour. Reusable 200+ times, or sacrificial.

Maturity meter
Logs temperature from the moment of placement.

Secure cloud
Time-stamped, tamper-proof records.

App, web and reports
Live strength, TTF curves, printable reports.

How temperature becomes strength



Calibration cubes — Strength–maturity curve - - Target

Illustrative

1. **Calibrate the mix**
Cubes at different ages build your mix's curve. One to two days.

2. **Deploy on the pour**
Sensors go in at critical points and log from placement.

3. **Watch strength live**
The temperature–time factor converts to strength, per ASTM C1074.

4. **Decide on data**
Strip, stress, lift or load when the target is reached.

Built on recognised standards

ASTM C1074 USA	Estimating concrete strength by the maturity method	**AASHTO T 325** USA	Strength estimation by maturity tests in transportation construction
ACI 228.1R USA	In-place methods to estimate concrete strength	**ACI 305R / 306R** USA	Hot- and cold-weather concreting
IS 456 India	Code of practice for plain and reinforced concrete	**IRC 112** India	Code of practice for concrete road bridges

The range

Hardware made and tested for site conditions.

Designed and manufactured in India. Rugged meters, reusable sensors, and one meter covering about 4,000 sq ft of floor area.

For sites

Standard CP-CMMS

Four-sensor maturity meter with tagged reusable sensors, charger and universal reset key.

Sensors	4
Connectivity	Site Wi-Fi
Power	Rechargeable

For precast plants

Precast VC-1.0

Permanent sensor in the casting bed, automatic start and stop on every pour, continuous data and auto reset.

Sensors	Up to 9 incl. ambient
Connectivity	Site Wi-Fi
Power	Continuous charging

Latest · 2025

CP-CMMS V3.0

Compact and more reliable, with LoRa wireless and long battery life. Simple enough for site teams to install themselves.

Sensors	On request
Connectivity	LoRa
Power	Long-life battery

	Standard	Precast VC-1.0	V3.0
Best for	Building and infrastructure sites	Precast plants, every shift	Large sites and DIY installs
Sensor format	Reusable and sacrificial, 3 m cable	Permanent sensors in the casting bed	Reusable and sacrificial
Cable reach	3 m and 10 m extensions	Up to 20 m cumulative	3 m and 10 m extensions
Coverage	About 4,000 sq ft per meter	Two sensor points per element	On request

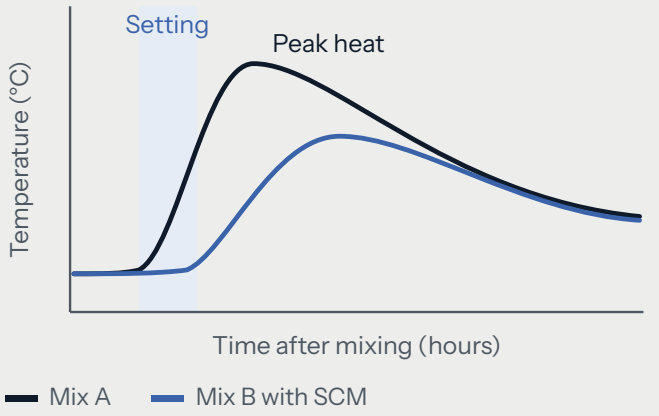
All models: maturity method per ASTM C1074, sensors reusable 200+ times, readings on app, web app and site software, training and technical support included.

For concrete labs · QA/QC and R&D

Make your concrete lab smart.

The same sensors and software turn a cement and concrete lab into a continuous data source. Hydration, mix behaviour and strength are recorded automatically and non-destructively.

Early hydration fingerprint Illustrative



What the lab measures

- ✓ **Initial and final setting time**
- ✓ **Heat of hydration and temperature profile**
- ✓ **Hydration kinetics**
- ✓ **Early-age strength gain**

Thermal measurement of early hydration per ASTM C1753.

1 Characterise cement

- Setting time and heat of hydration
- Hydration kinetics over time
- Compare cements and SCMs

2 Characterise the mix

- Optimise mixes for early strength
- Compare curing conditions
- Evaluate admixture and cement combinations

3 Monitor strength live

- Track early-age strength continuously
- Cast and crush fewer cubes
- Data for demould, loading and dispatch

4 Data-driven QC

- Spot deviations early and correct them
- Check batch-to-batch consistency
- Keep complete digital records

Less effort
Fewer cubes to cast, cure and crush.

Cleaner lab
Smaller curing tanks, less broken-cube waste.

Greener testing
Less water, energy and material.

Better decisions
Continuous data, not samples.

Ideal for

QA/QC and R&D labs · Mix designers and consultants · Researchers and faculty · Infrastructure and industrial projects

Lab standards: ASTM C1753 early hydration by thermal measurement · ASTM C918 early-age strength and later-age projection · ASTM C1064 temperature of fresh concrete · ASTM C1074 maturity method.

For precast plants · since 2024

Precast VC-1.0, built into the bed.

A customised system for precast factories. The sensor is embedded permanently in the casting bed, so routine pours need no cast-in sensor and every pour on that bed is recorded.

- **Permanent bed sensor**
  Customised to the mould and flush with the base plate. Reused on every cycle.
- **Automatic start and stop**
  An ambient sensor detects each pour and starts and stops the reading on its own.
- **Continuous data, auto reset**
  Strength data streams through the cycle and the meter resets itself for the next pour.
- **Extra sacrificial sensor**
  Optional, for elements that need a reading from inside the concrete.

VC-1.0 deployment assessment at an L&T precast factory, Mumbai.

Every pour, hands-free

1. **Concrete placed** — On the bed
2. **Pour detected** — Ambient sensor starts logging
3. **Live strength** — From the bed sensor
4. **Target reached** — Demould or de-stress
5. **Auto reset** — Ready for the next pour

Don't wait for the crack. Measure the concrete while it develops.

For mass concrete, strength isn't the whole story. We measure core, mid-depth and surface temperatures through the early-age period, so your team can act before thermal limits are reached.

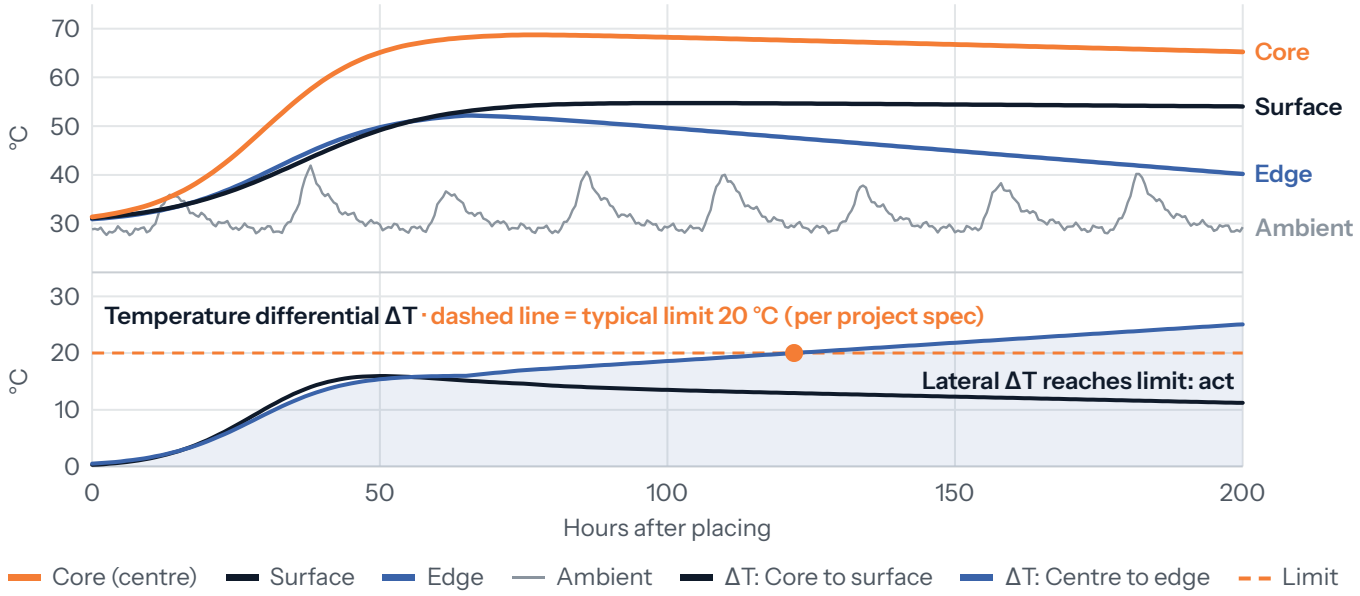
Heat of hydration → Core temperature rises

→ **Core-to-surface ΔT** → Expansion, then contraction

→ **Restraint** → Thermal tensile stress

→ **Result** → Early-age thermal cracking

Temperature history of a mass pour, with ΔT (illustrative, based on site data)



From prediction to proof.

We deliver the full thermal assurance cycle, not just temperature logs.

01 Assess
Identify whether the element carries a real thermal risk.

02 Predict
Estimate heat generation and temperature development for your mix and geometry.

03 Plan
Set sensor locations, control limits and response actions.

04 Monitor
Record core, mid-depth, surface and ambient temperatures live.

05 Interpret
Track peak temperature, ΔT, rate of rise and cooling against the plan.

06 Act
Flag when a limit is approached so insulation, curing or cooling can be reviewed.

07 Verify
Compare actual behaviour with project requirements.

08 Assure
Hand over an auditable record that thermal behaviour was measured and managed.

For TG, silo, data-centre and fab foundations, large rafts and pile caps, transfer beams and heavy columns, power and process plant structures.

Case study · ICCRIP 2024

PT slabs released on live strength.

SJ Contracts monitored post-tensioned slabs at a four-building commercial development in Wagholi, Pune, with sensors at the anchorage zone and mid-span. Stressing was released on measured in-place strength instead of waiting for cube results.

52

hours for the slab to reach the 28 MPa release strength. Site-cured cubes took about 110.

5

PT slab deployments, 2,200 monitoring hours in total.

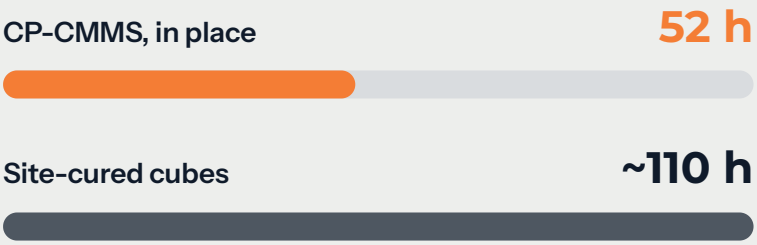
8

days saved across five PT slab cycles.

Source: K. Venugopal (SJ Contracts), D. L. Nikam (C-Probe Technologies), R. B. Ghongade (Bharati Vidyapeeth College of Engineering), ICCRIP 2024 case study, NICMAR University.

Time to 28 MPa stressing strength

Measured in place vs site-cured cubes



Same PT slab, same release target. Data from the SJ Contracts case study above.

Award

Winner, Concrete Technology Advancement Award

World of Concrete India Awards 2024, Informa Markets, Mumbai.

Trusted by 40+ clients

Full client list on page 09

L&T · TATA PROJECTS · Shapoorji Pallonji · DLF · ITC Limited · UltraTech Cement The Engineer's Choice · CAPACITE

Clients

Trusted by 40+ clients.

Contractors, developers, precast plants, cement makers and universities use CP-CMMS on site and in the lab.

40+
clients

33+
projects since 2021

20+
engagements in progress

L&T	TATA PROJECTS	Shapoorji Pallonji	DLF	ITC Limited	UltraTech CEMENT The Engineer's Choice	CAPACITE
SMART WORLD	Sachi Precast	JANGID GROUP CREATING LANDMARKS	URBANAAC EXPERT PRECAST SOLUTIONS	SJ Contracts	Siddhivinayak Precast Pipes	Spacetech
stedrant TECHNOCLINIC PVT LTD	Homission	MIT-ADT UNIVERSITY PUNE, INDIA	॥वसुधैव कुटुम्बकम्॥	JSPM UNIVERSITY PUNE	MiCoB	Marwah Group

Engagements in progress 20+

Reliance	NHSRCL	GODREJ PROPERTIES	L&T Realty	MSIDC	AURIC	magicrete	The Brij	SERENDIPITY ARTS

Across sectors

- Buildings
- Precast plants
- Roads and highways
- Bridges
- Metro and railways
- Dams and mass concrete
- Docks and harbours
- Airports
- Concrete labs

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About C-Probe

Indian engineering for India's concrete.

Founded in Pune in 2021 to replace imported maturity meters with an indigenous, patented system, built for Indian sites and priced for them.

3 Indian patents granted

1 US patent granted

8 software copyrights

3 patents in examination

Leadership

Dr. Hemant Dhonde
Director · PhD, Civil Structures, USA. 26+ years in research, teaching and industry.

Dr. Rajesh Ghongade
Director · PhD, E&TC Engineering. 27+ years in research, teaching and industry.

Er. Nitin Solanke
Director · BE, E&TC Engineering. 12+ years in research, product development, manufacturing and business.

Er. Suresh C. Tripathi
Director · BE Civil, PGDBA. 37+ years in industry, business and management.

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SPTBI incubator · Startup India Seed Fund · DST NIDHI · COEP's Bhau Institute

Recognition

Winner, Concrete Technology Advancement Award
World of Concrete India 2024

Business Model of the Year
MIT-ADT University, 2024

2nd Prize
JSPM Startup Fest 2024

Designed and manufactured in Pune with our partner GIZMOIOT INNOVATIONS LLP.

Book a demo on your own mix.

We calibrate with your team, deploy on your pour and train your engineers.

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