Use case · Mass concrete and tall buildings

Control the heat. Prevent thermal cracking.

In large pours, heat of hydration builds a temperature difference between core and surface that can crack the element. CP-CMMS measures core, mid-depth, surface and ambient temperatures live, so your team acts before limits are reached.

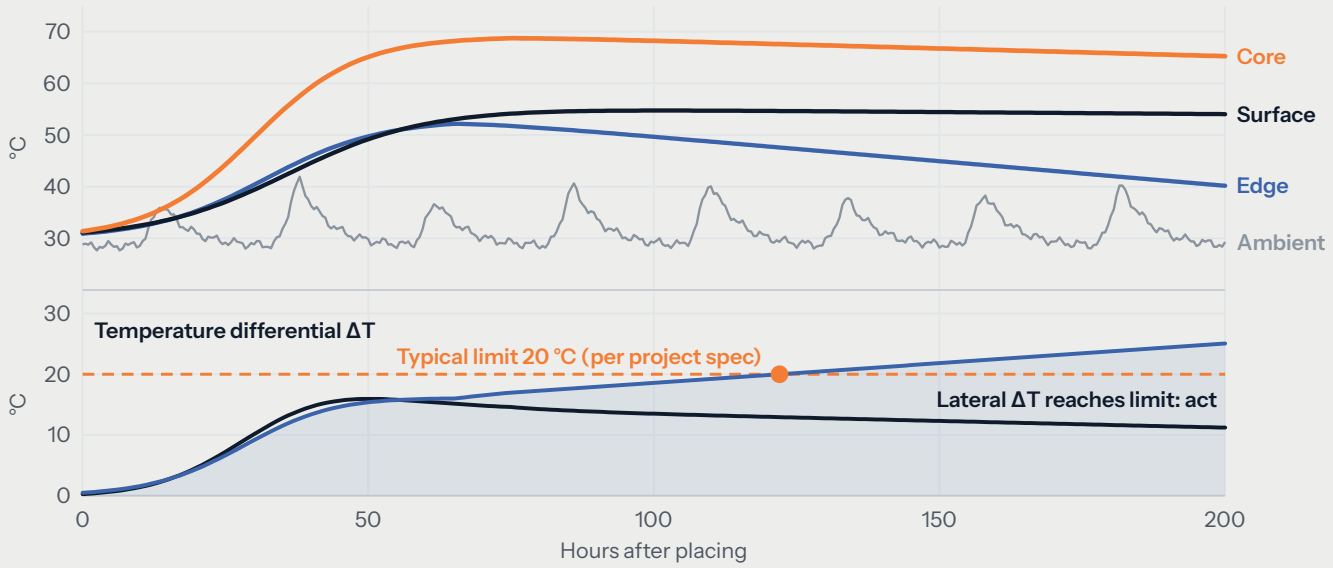


Large slab pour on an Indian site

Heat of hydration → **Core temperature rises** → Core-to-surface ΔT → **Expansion, then contraction** → Restraint → **Thermal tensile stress** → Risk → **Early-age thermal cracking**

Temperature history of a mass pour, with ΔT

Illustrative, based on site data



Applications

Mass foundations

- Raft and mat foundations
- Pile caps
- Thick basement walls
- Equipment foundations
- Bridge piers and abutments

Tall buildings

- Columns and core walls
- Shear walls
- Mega columns
- Transfer beams

How it works

1. **Place sensors**
   At core, mid-depth and surface of critical sections.
2. **Monitor live**
   Temperature logged continuously from placement.
3. **Compute maturity and strength**
   In-place strength estimated as the pour cures.
4. **Act within limits**
   Adjust insulation, curing or cooling before ΔT limits are reached.
5. **Record and report**
   An auditable record for quality and compliance.

Ideal for EPC contractors · Consultants and designers · Ready-mix producers · Infrastructure and industrial projects · Government and public works

Standards referenced

ASTM C1074	ACI 228.1R	ASTM C918	ASTM C1064	IS 456	IRC 112
USA	USA	USA	USA	India	India

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Concreting with Confidence

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Measure maturity. Decide on data.

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