

Get Unmatched Visibility Into Your Cooling Water Network

We build field-validated models of your cooling water system and maintain it as a site asset, supporting projects, expansions, and troubleshooting.



A project is increasing unit rates. Process conditions will shift, new bundles will be added, and total duty climbs with it. Can the pumps keep up? Does the tower have capacity? Will the new bundles rob flow from existing exchangers? What has to change to keep the rest of the system whole? **With a field-validated model, that is an optimization exercise, not a set of assumptions.**

Measure. Model. Maintain.

01 Measure the Network

Comprehensive performance surveys across cooling towers, pumps, and exchangers, all field-measured. No shutdowns, no hot taps. You'll have hard data on where your system actually operates in one to two weeks.

02 Build the Model

A high-resolution, high-detail, field-validated model of the entire network. A key tool to test and optimize designs in any combination: impeller upgrades, piping changes, hydraulic balancing, added bundles, duty changes, and more.

03 Keep It Current

We offer long term support through our UMaaS program. Evaluate a scenario, support a project, troubleshoot a system, plan an expansion: we're already in context. Your team asks, we run it. Unlimited, covered by a straightforward fee.

Why a Specialist

	TYPICAL EPC FIRM	HYDRUS WORKS
Experience	Hydraulic verification is a box to check, required by the site. EPC process engineers learn on your utility system to gain experience.	Utility modeling is our specialty. We've modeled hundreds of systems, supported a wide variety of projects, and have a niche expertise in industrial utilities.
How it is built	Largely from drawings and design data, scoped as narrowly as possible. Responsibility for accuracy rests on the site engineers and limited data.	Our models are built to be comprehensive and to answer any question. They are validated against a system we walked, measured, and verified in the field.
What you keep	Nothing. Most EPC's exclude a developed model in the deliverables.	A site asset for the long term. UMaaS enrollment keeps it current for the next question, project, or troubleshooting.

Common Analyses

■ Process expansion and new heat duty impacts	■ Cooling tower capacity and performance	■ Temporary and turnaround (TAR) configurations
■ Cooling-water-limited process debottlenecking	■ Pump performance, sparing, and pump trip scenarios	■ Vacuum and sub-atmospheric pressure remediation at high points
■ Exchanger rerating, redesign, and flow improvements	■ Low flow and high outlet temperature troubleshooting	■ Backflush and header flushing effectiveness
■ Hydraulic balancing: flow distribution, pressure drop, and valve throttling	■ Minimum velocity checks for fouling and corrosion risk	■ Seasonal energy savings from pump and fan optimization
■ Supply and return temperature prediction, hot spots, and weather impacts	■ Cross-connections with other cooling water networks	■ Long-term capacity and capital planning

Start With a Walkdown

Call us and we will walk the system with your team to scope the survey and effort. You will know what the model can answer before you commit to anything.

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