Out with the Old — In with the Cold

As you can imagine, when you’ve made the decision to deploy our transformative immersion cooling technology in your data center, some modifications to your IT equipment will be necessary.

Legacy cooling, and even newer technologies such as rear-door heat exchangers (RDHx) and liquid to chip (LTC) systems, rely on air circulation to remove the heat. This means they require fans to do all or part of the work.

Liquid immersion cooling is an entirely different approach that eliminates the use of air as a heat-removal medium. This is where our Conversion-to-Immersion program comes into play — optimizing any OEM server to run immersed in our single-phase ElectroSafe® coolants.

Compatible with ALL Leading Servers

OEM In-Factory Conversion
What’s Involved?

First off, even though the medium has changed, the fact that you can run any OEM server doesn’t. Any off-the-shelf server can be made immersion-ready with our Conversion-to-Immersion program allowing your equipment to deliver the full potential, reliability and efficiency of immersion cooling.

Since air is no longer required, we start by removing or disabling the components that only relate to powering and moving air (fans, extra power supplies, air shrouds, etc.), replacing them with a BIOS change or emulator chips when necessary. Next, the thermal interface material adhering heat sinks to processors is also removed and replaced with a substitute. Once immersed, there are no thermal restrictions on heat producing components.

If you’ll be installing new systems, you can have them delivered straight to one of our nearby, regional service depots to undergo conversion. Or, if you’ll be utilizing existing servers, we can provide our Conversion-to-Immersion services right in your facility, practically anywhere in the world.

The Process is Simple — The Benefits Are Extensive

GRC’s immersion cooling systems have over a decade of successful deployments spanning the globe and coupled with our ElectroSafe® coolants have been proven to improve reliability and overall operations by:

- Eliminating Hot Spots, Vibrations, & Environmental Contaminants
- Preventing Hardware Oxidation & Corrosion and Reducing Failure Rates
- Cutting Server Power Consumption Up to 10-20%
- Decreasing Core Chip Temperature by 20° C
- Lowering the Operating Temperatures of All Components
- Increasing Rack Density & Optimizing Floor Space
- Reducing Maintenance Time & Costs for Cooling System & IT Equipment

Learn More About Immersion Cooling and GRC’s Conversion-to-Immersion Program

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