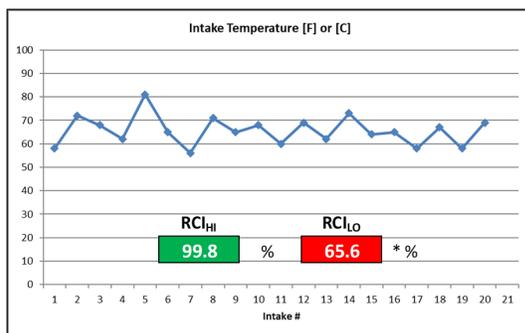


# Rack Cooling Index (RCI)<sup>®</sup> Calculator v. 2.3

The Easy Way to Show Conformance with the ASHRAE Thermal Guidelines

The RCI is a leading best-practice metric for quantifying the conformance of the IT equipment intake air temperatures with the ASHRAE Thermal Guidelines. The RCI Calculator has a full implementation of the RCI and ASHRAE specifications.



Typical RCI applications include the following:

- **Assess IT Thermal Conformance**  
RCI provides a standardized way for data center staff to check the data center thermal conformance.
- **Design Equipment Environments**  
RCI provides an easy way for designers to evaluate and report the effectiveness of a specific cooling solution.
- **Provide Design Specifications**  
Data center owners/operators can specify a certain level of thermal quality in a standardized way, e.g., RCI > 95%.
- **Help Product Marketing**  
RCI demonstrates the benefit of a cooling solution. A product with an RCI near 100% could be marketed as such.

The Excel<sup>®</sup> RCI Calculator calculates the RCI for specified intake air temperatures. The software also plots the temperature distribution and calculates key statistics, which provide additional information for optimizing the thermal environment.

The ASHRAE Thermal Guidelines provide recommended and allowable air intake temperature ranges to protect the IT equipment and cap data center cooling costs. The RCI metric compresses the measured or modeled temperatures into two numbers: RCI<sub>Hi</sub>=100% mean no intake temperatures above the max recommended and RCI<sub>Lo</sub>=100% mean no intake temperatures below the min recommended. Both numbers equal to 100% signify absolute compliance, i.e., all temperatures are within the recommended range. The Calculator includes a full implementation of the ASHRAE specification, including elevation derating and adjustments to the max recommended temperature. The RCI Calculator accepts either IP or SI units.



The Excel<sup>®</sup>-based Rack Cooling Index (RCI)<sup>®</sup> Calculator v 2.3 is available as single-user and multiple-user licenses. **To purchase the RCI software, please write to [RCI@ancis.us](mailto:RCI@ancis.us)**

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