

Cool with Ambient Air to Reduce Cost and Climate Risk

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The heat removal systems of data centers have a big, ugly, environmental footprint. A rapid shift to a different cooling technology could reduce annual CO₂ equivalent emissions by 500 million metric tons by 2030. The new open loop ambient air cooling solution from Forced Physics DCT minimizes the energy required for cooling and eliminates the need for cooling water. Best of all, it dramatically simplifies the data center and lowers costs by completely eliminating the need for chillers, air handler units, economizers, and water towers.

Legacy Data Center

Indoor Air Facility Water Refrigerant Tower Water Outdoor Air

Multiple Closed Loops: Extra Complexity and Cost Uses Refrigerant and Cooling Water Rack Inlet Air Must Be Cooled Average Energy For Cooling: 40-60% of Heat Load + 8% for Server Fans

> Data Center Construction Cost: \$8-9M per MW of Compute

Future Data Center



One Open Loop: Simple No Refrigerants, No Cooling Water No Need to Cool Rack Inlet Air

Average Energy for Cooling: 2% of Heat Load in Any Climate No Server Fans

Data Center Construction Cost: \$4-5M per MW of Compute



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