

Midas Green Technologies

The high efficiency, high performance data center cooling solution.



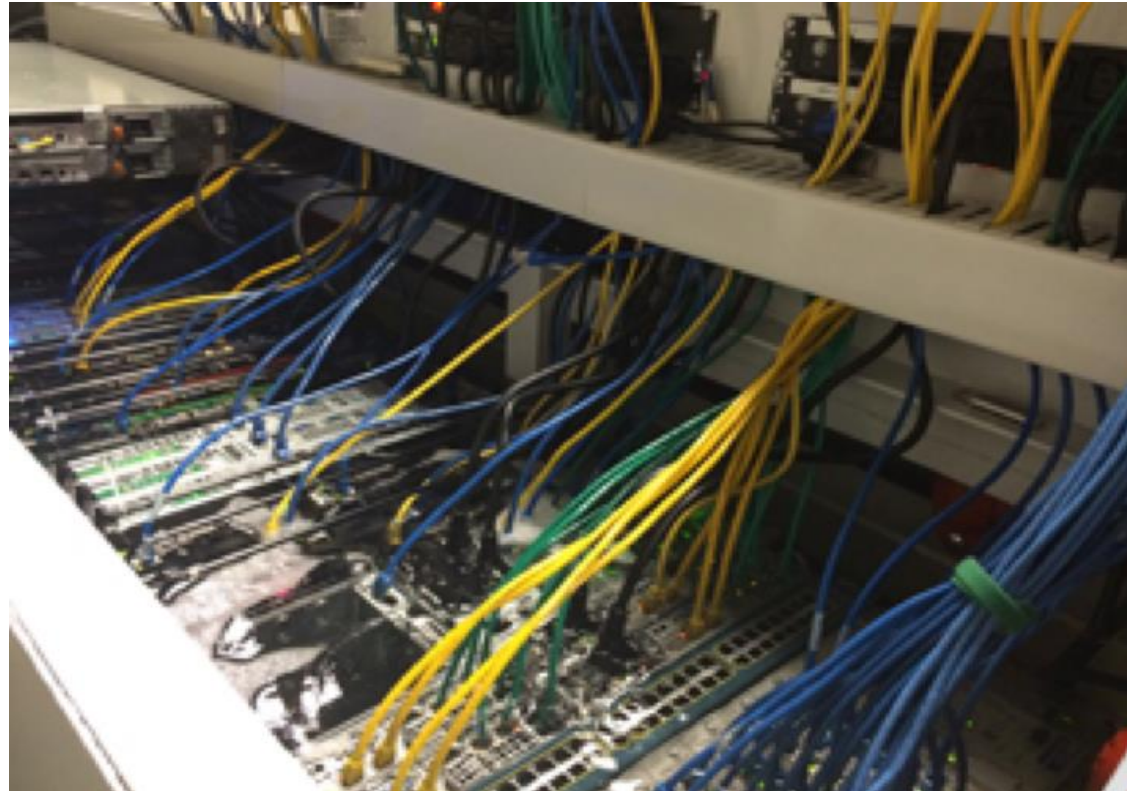
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Immersion Cooling

Immersion cooling is a practice by which electronic components are submerged in a non-conductive heat transfer liquid.



Why Midas XCI™ Immersion Cooling?

- ▶ Reduce cooling expenses by ***up to 90%***
- ▶ Space requirements: **60%** of traditional raised floor data centers
- ▶ Scalable technology from “technology closets” to large data centers

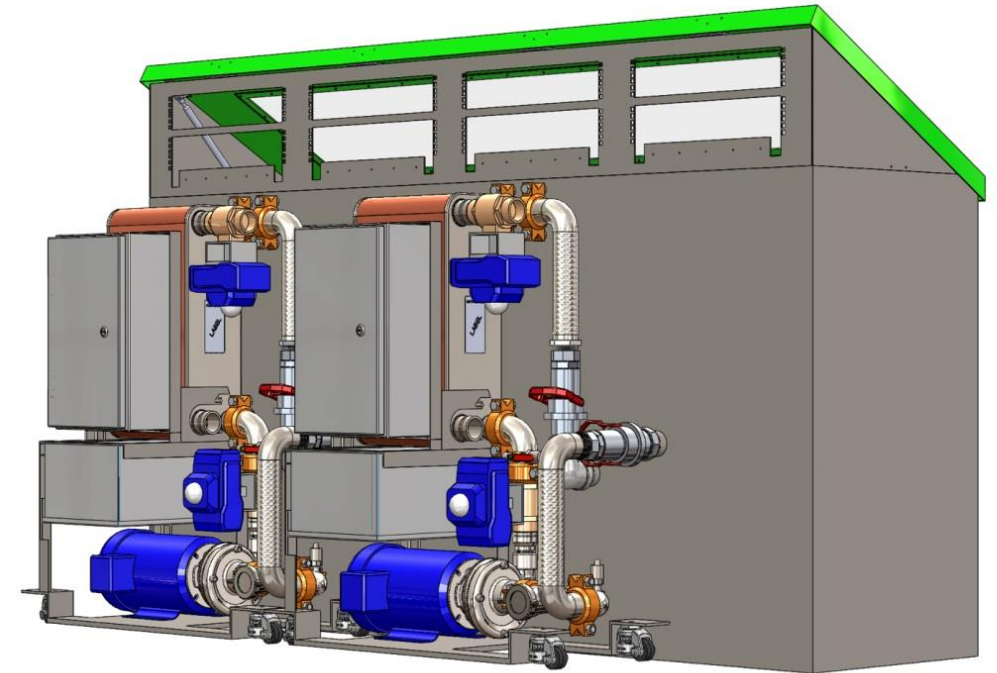
Midas XCI™

Immersion Cooling System



The Midas XCI™ 50u System

- ▶ Typically used in data centers (50u capacity)
- ▶ Active Redundancy
 - ▶ Option for active backup-pumps/heat exchanges/controls
 - ▶ Modules easily attach/detach from main system without tools in minutes
- ▶ Large Heat Dissipation Capacity
 - ▶ Able to dissipate at least 50kW and up to 150kW of heat.*
- ▶ Cable Management
 - ▶ Standard 19" mounts for PDUs, patch panels or switches without wasting server space
- ▶ Advanced Control System
 - ▶ Real-time temperature control and data logging
 - ▶ Proprietary smart continuous flow control



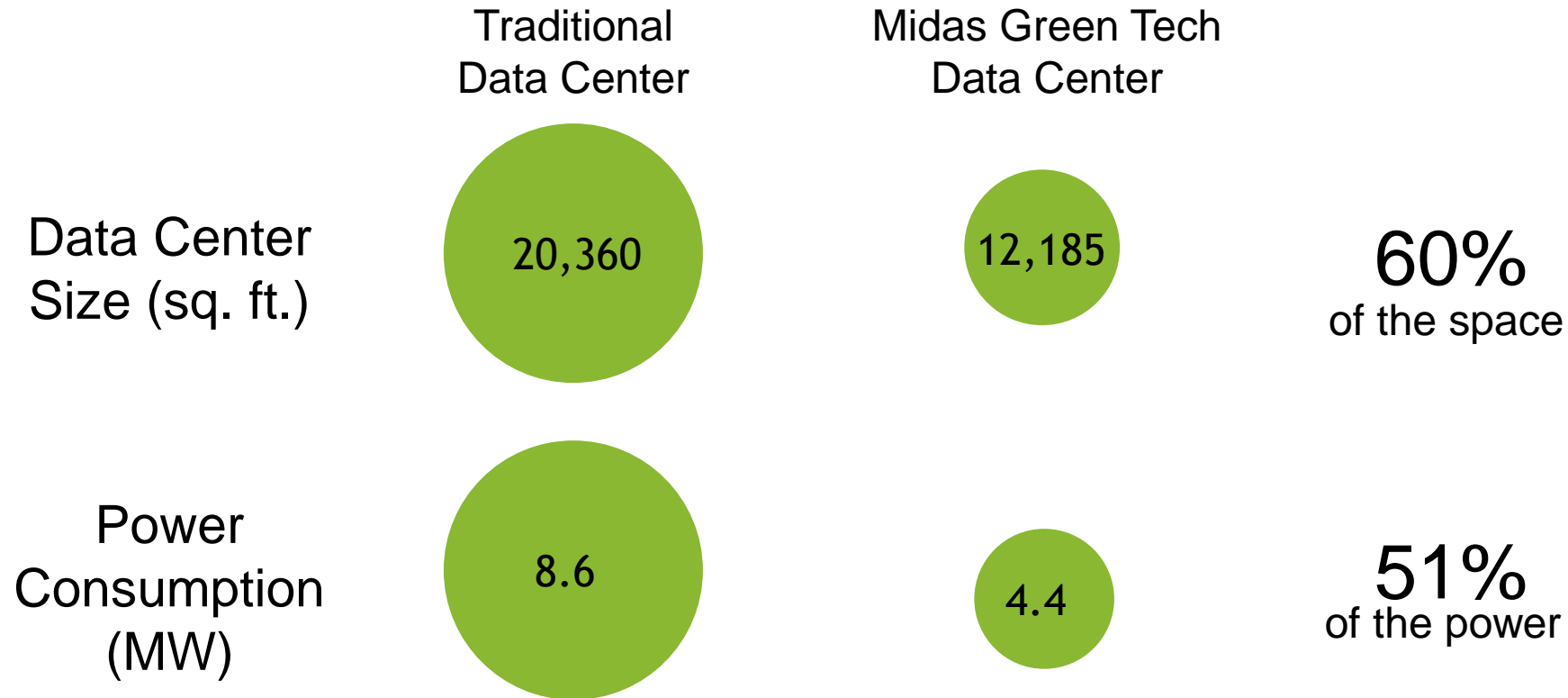
*Midas XCI Power Dissipation varies from 50kW-150kW depending on water temperature availability. The addition of a water chiller can increase the capacity of a system to 200kW regardless of location at the expense of a higher PUE.

The Midas XCI™ 12u System

- Midas XCI™ 12U was designed for use in small data closets
- Urban offices and mobile applications
- Facilitates hardware components typically utilized in office environments
 - Servers
 - Communications equipment: routers, hubs, etc.



Midas vs. Traditional Data Center



ROI: 6 months

Analysis developed using 10,000 Dell Power Edge R630 in a 1.8 PUE

Air data center vs. a Midas XCI data center

Experience: CH3 Data Center, Austin, Texas

		Midas XCI™ tank	Traditional
IT load*	kW	48	52.8
Cooling Load	kW	2.88	42.24
Yearly Cost	\$	\$53,485	\$99,906

Yearly Savings	\$46,420
Yearly Savings	46.5%

*10% energy savings from disabling cooling fans
Energy Costs: \$.12/KwH

Midas XCI™

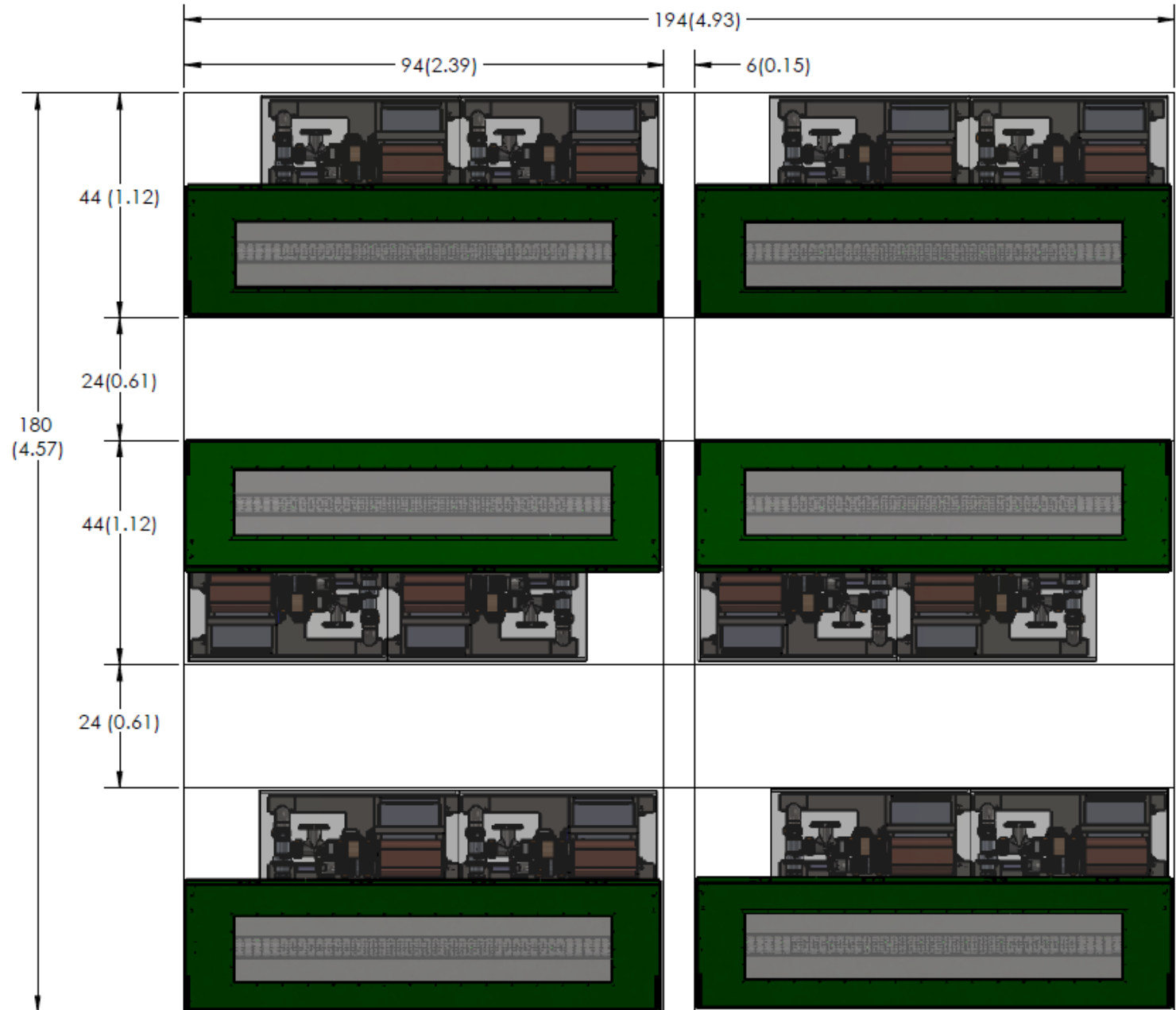
Deployments



Typical Data Center

Super Tank Cluster

- ▶ Up to 900kW in 300ft² (28m²)
- ▶ One by one redundancy
- ▶ Each tank is independent
- ▶ “All-in-one” management system



Electronics Closets/Offices



- ▶ Midas XCI™ immersion cooling technology enables facilities to benefit from highly reliable electronic component cooling capabilities.
 - ▶ Reduces energy costs by 80% or more compared to traditional cooling methods
 - ▶ Delivers high capacity cooling without expensive air conditioning infrastructure
- ▶ Midas XCI™ 12U was designed for use in small data closets, urban offices and mobile applications
- ▶ Facilitates hardware components typically utilized in office environments
 - ▶ Servers
 - ▶ Communications equipment: routers, hubs, etc.