

**Customer:** Data center-reliant business in the midwestern United States.

**Project:** Create cold aisle containment to optimize existing air conditioning system.

**Requirement:** The customer was very concerned about not having enough cooling capacity in their system. They were running at 91% of their available capacity--726 Kbtu/h with a total availability of 792 Kbtu/h. Customer was unable to shut down to service the CRAC units.

**Simplex Solutions:** Using AirBlock data center curtains, Simplex designed cold aisle containment with hot aisle ambient space for this 1,250 square foot data center, covering three cold aisles and four hot aisles. The solution included strip doors for end-of-aisle access and curtains for over the rack containment.

**Results:** Installation went quickly without issue or disruption. Client saw immediate results and achieved system redundancy. Additional fans were added to reduce hot spots.



### Before Install

Liebert Readings	% Utilization	Kbtu/h	kw	
Unit 1	100%	264	77	
Unit 2	100%	264	77	
Unit 3	75%	198	57.75	
Current Cooling Total		726	211.75	
<b>Less UPS total reading</b>		<b>265.36</b>	<b>76.75</b>	Loss due to air inefficiency
Total as% of redundant limit			<b>137.50%</b>	% of redundant cooling
Total as % of total limit			<b>91.67%</b>	% of total cooling

### Post Curtain Install w/2 fans running

Liebert Readings	% Utilization	Kbtu/h	kw	
Unit 1	50%	132	77	
Unit 2	75%	198	77	
Unit 3	50%	132	57.75	
Current Cooling Total		462	211.75	
<b>Less UPS total reading</b>		<b>1.360884</b>	<b>-0.25</b>	Loss due to air inefficiency
Total as % of redundant limit			<b>87.50%</b>	% of redundant cooling
Total as % of total limit			<b>58.33%</b>	% of total cooling