STULZ CyberRow®

Intelligent Rack Cooling



CyberRow. Put the cooling where the heat is. 9 - 73 kW



Comprehensive rack cooling with STULZ CyberRow



Another innovative, economical, energy efficient data center cooling solution by STULZ.

Designed for scalability, reliability, and seamless integration into new or existing data centers; STULZ CyberRow rack cooling systems are suitable for use in open and contained hot aisle and cold aisle configurations. STULZ CyberRow is ideal for hot spot cooling in small to enterprise size data centers.

Predictability - Put the cooling where the heat is.
Front Discharge for Hot or Cold Aisle Capture
Side discharge for Open Aisle Configurations
Versatility - Designed for easiest installation.
Designed for installation on raised floor or non-raised floor applications
Suitable for new and existing data centers
Can be installed in the middle or at the end of a row - 12" and 24" cabinet widths
Chilled Water & Direct Expansion (Air, Water, or Glycol) Cooling Methods
Wide range of cooling capacities for small, medium, and the largest applications
Top and bottom pipe and power connections
100% front and rear service access
Highest cooling capacities in the industry - up to 73 kW per unit
Adapts to all major rack manufacturers racks and rack capture systems
Casters included to easily locate in place
Availability - Stay on top of your operation.
STULZ E^2 Microprocessor Controls
pLAN communicates with up to 8 units without a BMS
Seamless integration with all BMS platforms
ROI - Variable and Scalable Capacity.
Fully adjustable fan speed control for energy savings
Built in redundancy
Capacity assist functionality saves energy and operating expenses
Scalability - add STULZ CyberRow cooling units as your data center grows
Single and three phase voltage available

Equipment Specifications							
		STULZ CyberRow 12"	STULZ CyberRow 24"				
		CRS-090	CRS-180				
Air Flo	w, CFM	2,900 5,800					
Coil Rows / F	ace Area, Ft. ²	4 / 5.8 4 / 11.6					
Fan Quar	ntity / Type	3 Backward Curved, Direct-Drive EC Fans					
Maximum Fan Horsepower		1	4				
Dimensions (H x W x D)	inches	78.4 x 11.6 x 42.1	78.4 x 23.4 x 42.1				
	mm	1,991 x 294 x 1,069	1,991 x 594 x 1,069				



Pair with **STULZ Ultrasonic Humidifiers** and **STULZ Perimeter Cooling** CRAC and CRAH for complete room temperature and humidity control



STULZ Direct Room Ultrasonic Humidifier

Solutions: Row Cooling Configurations





Open Aisle Configuration organizes racks in a single row or in hot and cold aisle rows, but without containment. The STULZ CyberRow draws hot air from the external environment or hot aisle, removes the heat, and supplies cooled air to the front of IT equipment in the cold aisle.

With side discharge



Hot Aisle Capture captures the hot exhaust air from IT equipment and contains it so that it doesn't mix with cool air. The front of IT equipment is accessed in the external cold aisle. The STULZ CyberRow draws the contained hot air from the hot aisle, removes the heat, and supplies cooled air into the external cold aisle.

With front discharge



Cold Aisle Capture takes cooled air from the STULZ CyberRow and contains it so that it doesn't mix with hot air. The front of IT equipment is accessed in the contained cold aisle. The STULZ CyberRow draws hot air from the external environment, removes the heat, and supplies cooled air back into the captured cold aisle.

With front discharge

STULZ CyberRow **Chilled Water Solutions**

Chilled water (CW) is supplied to the CyberRow unit via building chiller or other chilled water plant. Chilled water has high affinity for heat, thus making it a very efficient cooling method. STULZ E² controller allows for independent valve and fan control so the unit can adjust immediately, and precisely, to varying heat loads and optimizes energy efficiency.

Features

- Highest cooling capacities in the industry
- 12" and 24" cabinet widths
- 3 EC fans: Independently, infinitely adjustable EC fans ensure maximum efficiency
- Highly efficient cold aisle or hot aisle containment systems can be implemented
- Ideal for data center without raised floors
- Use in low and high density areas
- Wide range of cooling capacities available
- 100% front and rear service access
- Adapts to fit most rack manufacturers usable in any data center
- pLAN link 8 units without a BMS
- Seamless integration with all BMS platforms
- High air flow with less noise
- Built in redundancy and capacity assist saves energy

CW

Valve

Filter

2-Way or 3-Way Valves









Performance Data Chilled Water Solutions



Model		12" Chilled Water						24" Chilled Water					
		CRS-090-C						CRS-180-C					
		Total Capacity		Sensible Capacity		Flow	Pressure	Total Capacity		Sensible Capacity		Flow	Pressure
		BTU/Hr	kW	BTU/Hr	kW	GPM	Drop, Ft. H ₂ O	BTU/Hr	kW	BTU/Hr	kW	GPM	Ft. H ₂ O
100°FDB / 69.2°FWB Entering Air Temperature													
	10°∆T	127,008	37.2	125,200	36.7	25.7	12.1	263,192	77.1	250,429	73.3	54.5	25.8
401 - 2001	12°∆T	119,461	35.0	119,461	35.0	20.2	8.5	251,539	73.7	245,539	71.9	43.5	17.8
45°E Ε\Λ/Τ	10°∆T	107,333	31.4	107,333	31.4	21.8	9.4	219,854	64.4	219,854	64.4	45.9	19.3
451 - LVVI	12°∆T	102,855	30.1	102,855	30.1	17.4	6.9	211,927	62.1	211,927	62.1	37.0	13.7
	10°∆T	95,717	28.0	95,717	28.0	19.5	8.0	192,259	56.3	192,259	56.3	40.5	15.6
SUF-EVVI	12°∆T	91,561	26.8	91,561	26.8	15.5	5.9	186,556	54.6	186,556	54.6	32.8	11.3
95°FDB/67.7	°FWB Ent	tering Air Ter	nperature										
	10°∆T	116,107	34.0	113,554	33.2	23.5	10.6	242,729	71.1	227,717	66.7	50.5	22.7
40 F - EVVI	12°∆T	108,271	31.7	108,271	31.7	18.3	7.4	230,726	67.6	222,663	65.2	40.1	15.7
	10°∆T	96,465	28.2	96,465	28.2	19.6	8.1	199,089	58.3	199,089	58.3	41.8	16.6
45 F - EVVI	12°∆T	91,834	26.9	91,834	26.9	15.6	6.0	190,287	55.7	190,287	55.7	33.4	11.7
	10°∆T	84,669	24.8	84,669	24.8	17.3	6.8	170,772	50.0	170,772	50.0	36.2	13.1
50°F - EVVI	12°∆T	80,417	23.5	80,417	23.5	13.7	5.1	164,228	48.1	164,228	48.1	29.0	9.5
90°FDB/66.1	°FWB Ent	tering Air Ter	nperature										
	10°∆T	108,988	31.9	108,988	31.9	22.1	9.7	221,108	64.7	204,623	59.9	46.2	19.7
40 F - EVVI	12°∆T	103,324	30.3	103,324	30.3	17.5	7.0	207,922	60.9	199,053	58.3	36.2	13.4
	10°∆T	96,139	28.2	96,139	28.2	19.5	8.1	177,357	51.9	177,357	51.9	37.4	14.0
45 F - EVVI	12°∆T	91,959	26.9	91,959	26.9	15.6	6.0	167,355	49.0	167,355	49.0	29.5	9.8
	10°∆T	84,788	24.8	84,788	24.8	17.3	6.8	148,407	43.5	148,407	43.5	31.6	10.7
50 F - EVVI	12°∆T	80,524	23.6	80,524	23.6	13.7	5.1	141,408	41.4	141,408	41.4	25.2	7.8
85°FDB/64.5	°FWB Ent	tering Air Ter	nperature										
	10°∆T	93,105	27.3	89,517	26.2	18.9	7.8	199,491	58.4	180,880	53.0	41.8	16.8
40 F - EVVI	12°∆T	84,791	24.8	84,791	24.8	14.4	5.5	184,737	54.1	174,604	51.1	32.4	11.3
	10°∆T	73,674	21.6	73,674	21.6	15.0	5.8	154,771	45.3	154,771	45.3	32.9	11.5
45 F - EVVI	12°∆T	68,684	20.1	68,684	20.1	11.7	4.4	144,039	42.2	144,039	42.2	25.6	8.0
	10°∆T	61,689	18.1	61,689	18.1	12.7	4.8	125,357	36.7	125,357	36.7	27.0	8.6
50F - EVVI	12°∆T	56,942	16.7	56,942	16.7	9.8	3.7	117,882	34.5	117,882	34.5	21.3	6.3
80°FDB/62.8	80°FDB/62.8°FWB Entering Air Temperature												
	10°∆T	81,155	23.8	77,151	22.6	16.6	6.6	176,442	51.7	156,565	45.8	37.2	14.0
40°F - EWT	12°∆T	72,250	21.2	72,250	21.2	12.3	4.6	159,804	46.8	149,444	43.8	28.2	9.3
	10°∆T	61,703	18.1	61,703	18.1	12.6	4.7	130,953	38.3	130,953	38.3	28.2	9.2
45°F - EWT	12°∆T	56,587	16.6	56,587	16.6	9.7	3.7	119,742	35.1	119,742	35.1	21.6	6.5
	10°∆T	49,488	14.5	49,488	14.5	10.2	3.8	101,625	29.8	101,625	29.5	22.3	6.7
50°F - EWT	12°∆T	44,393	13.0	44,393	13.0	7.7	3.1	93,093	27.3	93,093	27.3	17.1	4.9

STULZ CyberRow DX Solutions

Direct expansion type units cool air in the space with a condenser based system using green R410A refrigerant and either air, water, or glycol. Water is supplied by the building water plant and heat is rejected to the outdoor environment via STULZ air cooled condensers for air cooled units, the water tower for water cooled units and STULZ fluid coolers for glycol cooled units.

Features

- Highest cooling capacities in the industry
- 12" cabinet widths
- 3 EC fans: Independently, infinitely adjustable EC fans ensure maximum efficiency
- Highly efficient cold aisle or hot aisle containment systems can be implemented
- Ideal for data center without raised floors
- Use in low and high density areas
- Wide range of cooling capacities available
- 100% front and rear service access
- Adapts to fit most rack manufacturers usable in any data center
- pLAN link 8 units without a BMS
- Seamless integration with all BMS platforms
- High air flow with less noise
- Built in redundancy and capacity assist saves energy
- Electronic expansion valve: Finely controls the cooling capacity within a few seconds
- R410A refrigerant efficient and green











Performance Data DX Solutions

	12" DX - Air, Water, Glycol Cooled									
Model		CRS-042	2-AR/W/G		CRS-084-AR/W/G					
	Total Ca	apacity	Sensible (Capacity	Total Ca	apacity	Sensible Capacity			
	BTU/Hr	kW	BTU/Hr	kW	BTU/Hr	kW	BTU/Hr	kW		
Capacity,	100°FDB/69.2°F	WB Entering A	Air Temperature							
Air	51,542	15.1	51,542	15.1	98,587	28.9	98,587	28.9		
Glycol	50,464	14.8	50,464	14.8	96,492	28.3	96,492	28.3		
Water	55,394	16.2	55,394	16.2	106,653	31.3	106,653	31.3		
Capacity,	95°FDB/67.7°FW	/B Entering Ai	r Temperature							
Air	48,773	14.3	48,773	14.3	93,530	27.4	93,530	27.4		
Glycol	47,773	14.0	47,773	14.0	91,490	26.8	91,490	26.8		
Water	52,543	15.4	52,543	15.4	101,275	29.7	101,275	29.7		
Capacity,	90°FDB/66.1°FW	/B Entering Ai	r Temperature							
Air	46,033	13.5	46,033	13.5	88,128	25.8	88,128	25.8		
Glycol	45,111	13.2	45,111	13.2	87,579	25.7	87,579	25.7		
Water	50,051	14.7	50,051	14.7	97,261	28.5	97,261	28.5		
Capacity,	85°FDB/64.5°FW	/B Entering Ai	r Temperature							
Air	43,662	12.8	43,662	12.8	84,899	24.9	84,899	24.9		
Glycol	42,822	12.6	42,822	12.6	81,733	24.0	81,733	24.0		
Water	48,622	14.3	48,237	14.1	94,996	27.8	94,948	27.8		
Capacity,	80°FDB/62.8°FW	/B Entering Ai	r Temperature							
Air	42,357	12.4	41,916	12.3	82,569	24.2	82,293	24.1		
Glycol	41,436	12.1	41,145	12.1	80,734	23.7	80,734	23.7		
Water	46,881	13.7	44,622	13.1	91,618	26.9	88,171	25.8		

STULZ

STULZ Heat Rejection							
	SCS Air Cooled Condensers	FSS Fluid Coolers	Water Tower				
BTU/Hr	136,650	133,680	147,810				
kW	40	39	43				

Refer to STULZ Heat Rejection Engineering Manual for more specific data.





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