

Data Center Airflow Management Solutions

CyberRow Rack Cooling

9–73 kW

EATON

Powering Business Worldwide

Switch  N to Eaton.

Comprehensive rack cooling with CyberRow

Innovative, economical, energy efficient data center cooling solution.

Designed for scalability, reliability, and seamless integration into new or existing data centers; CyberRow rack cooling systems are suitable for use in open and contained aisle configurations. 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 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
- Wide range of cooling capacities for small, medium, and large 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 data center containment systems
- Casters included to easily move and relocate when needed

Availability — stay on top of your operation.

- E² microprocessor control system with a backlit LCD display for visual indication of unit operating conditions
- Private local area network (pLAN) provides monitoring and control of up to eight precision air conditioners without a Building Management System (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 CyberRow cooling units as your data center grows
- Single and three phase voltage available



12" CyberRow with front air discharge.

24" CyberRow with side air discharge.

CYBERROW STANDARD CONFIGURATIONS

Part Number	Rack Width	Input	Piping Location	Air Discharge	Humidifier	BMS (Ethernet)
SZ12CW1P2VT	12"	208V 1-Phase	Top	Front	N/A	Yes
SZ12CW3P2VT	12"	208V 3-Phase	Top	Front	N/A	Yes
SZ24CW3P2VT	24"	208V 3-Phase	Top	Front	No	Yes
SZ24CW3P2VTS	24"	208V 3-Phase	Top	Side	No	Yes
SZ24CW3P2VTH	24"	208V 3-Phase	Top	Front	Yes	Yes
SZ24CW3P2VSDH	24"	208V 3-Phase	Top	Side	Yes	Yes

Note: Other configurations available upon request

CYBERROW STANDARD OPTIONS

Part Number	Description
SZLKD20	Strip type water detection (20 feet)
SZSMKDT	Smoke detector
SZDLPWR	Dual power connections with ATS (no cooling capacity loss)
SZSTARTUP1	Start-up service for first unit
SZSTARTUP1M	Start-up service for first unit (Metro)
SZSTARTUP2	Start-up service for each additional unit
SCSTARTUP2M	Start-up service for each additional unit (Metro)

Note: Other options available upon request

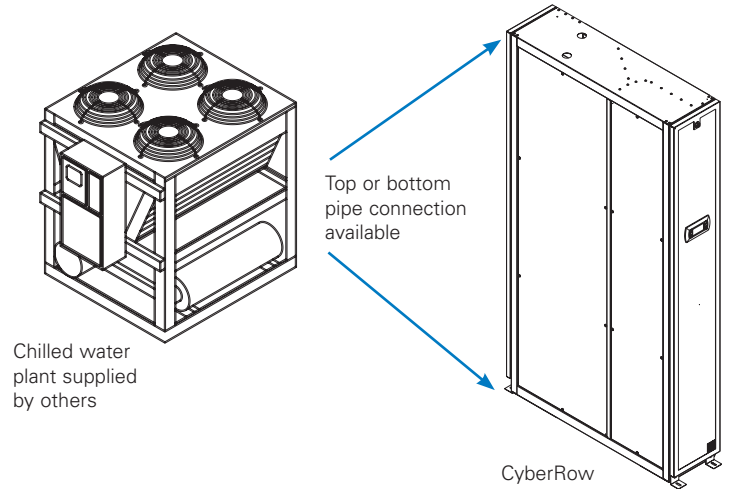
CyberRow Chilled Water Solutions

Chilled water (CW) is supplied to the CyberRow via building chiller or other chilled water plant. CW has a high affinity for heat, thus making it a very efficient cooling method. The 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 electronically commutated (EC) fans: independently, infinitely adjustable EC fans ensure maximum efficiency
- Highly efficient 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 airflow with less noise
- Built in redundancy and capacity assist saves energy
- 2- or 3-way valves

Piping connection locations for CyberRow

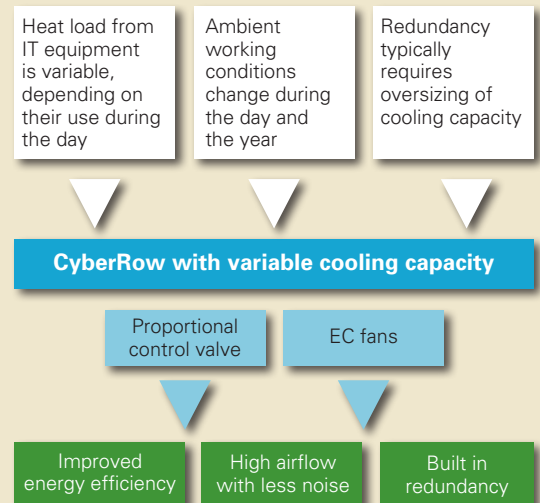
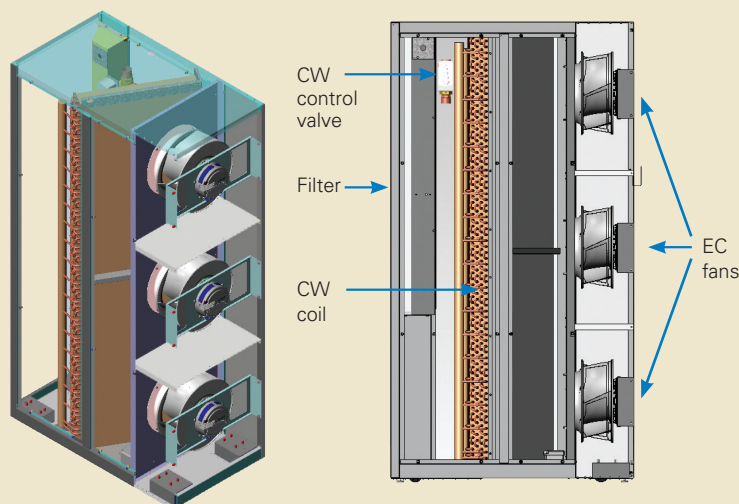


EQUIPMENT SPECIFICATIONS

	CyberRow 12"	CyberRow 24"	
Airflow (CFM)	2,900	5,800	
Coil rows / face area, FT ²	4 / 5.8	4 / 11.6	
Fan quantity / 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

Learn more about Eaton's CyberRow rack cooling system at www.eaton.com/cyberrow

Internal view of the 24" CyberRow with chilled water.



Chilled Water Performance Data

Model	12" Chilled Water							24" Chilled Water						
	Total Capacity		Sensible Capacity		Flow Rate GPM	Pressure Drop, Ft. H ₂ O	Total Capacity		Sensible Capacity		Flow Rate GPM	Pressure Drop, Ft. H ₂ O		
	BTU / Hr	kW	BTU / Hr	kW			BTU / Hr	kW	BTU / Hr	kW				
100°F DB / 69.2°F FWB Entering Air Temperature														
40°F - EWT	10°ΔT	127,008	37.2	125,200	36.7	25.7	12.1	127,008	37.2	125,200	36.7	25.7	12.1	
	12°ΔT	119,461	35.0	119,461	35.0	20.2	8.5	119,461	35.0	119,461	35.0	20.2	8.5	
45°F - EWT	10°ΔT	107,333	31.4	107,333	31.4	21.8	9.4	107,333	31.4	107,333	31.4	21.8	9.4	
	12°ΔT	102,855	30.1	102,855	30.1	17.4	6.9	102,855	30.1	102,855	30.1	17.4	6.9	
45°F - EWT	10°ΔT	95,717	28.0	95,717	28.0	19.5	8.0	95,717	28.0	95,717	28.0	19.5	8.0	
	12°ΔT	91,561	26.8	91,561	26.8	15.5	5.9	91,561	26.8	91,561	26.8	15.5	5.9	
95°F DB/67.7°F FWB Entering Air Temperature														
40°F - EWT	10°ΔT	116,107	34.0	113,554	33.2	23.5	10.6	242,729	71.1	227,717	66.7	50.5	22.7	
	12°ΔT	108,271	31.7	108,271	31.7	18.3	7.4	230,726	67.6	222,663	65.2	40.1	15.7	
45°F - EWT	10°ΔT	96,465	28.2	96,465	28.2	19.6	8.1	199,089	58.3	199,089	58.3	41.8	16.6	
	12°ΔT	91,834	26.9	91,834	26.9	15.6	6.0	190,287	55.7	190,287	55.7	33.4	11.7	
50°F - EWT	10°ΔT	84,669	24.8	84,669	24.8	17.3	6.8	170,772	50.0	170,772	50.0	36.2	13.1	
	12°ΔT	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°F DB/66.1°F FWB Entering Air Temperature														
40°F - EWT	10°ΔT	108,988	31.9	108,988	31.9	22.1	9.7	221,108	64.7	204,623	59.9	46.2	19.7	
	12°ΔT	103,324	30.3	103,324	30.3	17.5	7.0	207,922	60.9	199,053	58.3	36.2	13.4	
45°F - EWT	10°ΔT	96,139	28.2	96,139	28.2	19.5	8.1	177,357	51.9	177,357	51.9	37.4	14.0	
	12°ΔT	91,959	26.9	91,959	26.9	15.6	6.0	167,355	49.0	167,355	49.0	29.5	9.8	
50°F - EWT	10°ΔT	84,788	24.8	84,788	24.8	17.3	6.8	148,407	43.5	148,407	43.5	31.6	10.7	
	12°ΔT	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°F DB/64.5°F FWB Entering Air Temperature														
40°F - EWT	10°ΔT	93,105	27.3	89,517	26.2	18.9	7.8	199,491	58.4	180,880	53.0	41.8	16.8	
	12°ΔT	84,791	24.8	84,791	24.8	14.4	5.5	184,737	54.1	174,604	51.1	32.4	11.3	
45°F - EWT	10°ΔT	73,674	21.6	73,674	21.6	15.0	5.8	154,771	45.3	154,771	45.3	32.9	11.5	
	12°ΔT	68,684	20.1	68,684	20.1	11.7	4.4	144,039	42.2	144,039	42.2	25.6	8.0	
50°F - EWT	10°ΔT	61,689	18.1	61,689	18.1	12.7	4.8	125,357	36.7	125,357	36.7	27.0	8.6	
	12°ΔT	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°F DB/62.8°F FWB Entering Air Temperature														
40°F - EWT	10°ΔT	81,155	23.8	77,151	22.6	16.6	6.6	176,442	51.7	156,565	45.8	37.2	14.0	
	12°ΔT	72,250	21.2	72,250	21.2	12.3	4.6	159,804	46.8	149,444	43.8	28.2	9.3	
45°F - EWT	10°ΔT	61,703	18.1	61,703	18.1	12.6	4.7	130,953	38.3	130,953	38.3	28.2	9.2	
	12°ΔT	56,587	16.6	56,587	16.6	9.7	3.7	119,742	35.1	119,742	35.1	21.6	6.5	
50°F - EWT	10°ΔT	49,488	14.5	49,488	14.5	10.2	3.8	101,625	29.8	101,625	29.5	22.3	6.7	
	12°ΔT	44,393	13.0	44,393	13.0	7.7	3.1	93,093	27.3	93,093	27.3	17.1	4.9	

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