

## Chilled water system (CW)

GCRAH(cw) units with a chilled water system manage without a refrigerant circuit of their own, but require a separate chilled water generator. The room air conveyed by the fan flows through the direct cooling unit, which transfers heat to the water-glycol mixture. A chiller removes the heat from this water-glycol mixture. The GCRAH units and chillers are connected to one another by a closed water-glycol circuit.

## Efficient and targeted cooling

Rooms exposed to high thermal loads need constant climatic conditions in order to function reliably. If you need precise, reliable and cost effective air conditioning for data centers and server rooms, the GCRAH series is an energy efficient and long-lasting series that fits the bill. These units cool more efficiently, more reliably and more sustainably than conventional comfort air conditioning systems. They occupy little floor space, and their compact size means they can be integrated in existing server rooms without problem.

### + Advantages at a glance

- Maximum cooling capacity with a minimal footprint
- High operational reliability with continuous operation 24/7, 365 days a year
- EC fans for maximum energy efficiency
- Precise regulation of room temperature and air humidity
- Reduction in noise levels by 4-5dB(A)



## GCRAH chilled water close control system

GCRAH ideal for applications where high sensible cooling and close control of temperature and humidity are required. The GCRAH chilled water range incorporates the latest EC plug fan(s), advanced controls and an increased coil area in the highest efficiency.

## Advantages

- |  |                                  |
|--|----------------------------------|
| ■ High Efficiency - EC plug fans                           | ■ Active Redundancy              |
| ■ Small footprint  | ■ High water temperatures        |
| ■ Adaptive Set Point                                       | ■ Integrated temperature control |
| ■ Available in Upflow (over) and Downflow (under) variants |                                  |

### Single Circuit



Air-Cooled Chiller Unit

### Double Circuit



Air-Cooled Chiller Units

## Single chilled water circuit configuration

Chilled water air conditioners utilise water coming from a single chiller as a means to transfer heat. The liquid flow in the unit's water coil is managed by an internal 2 or 3-way valve.

## Double chilled water circuit configuration

These units are provided as standard with two water circuits that never work simultaneously, as they operate as 100% back up to each other. Such circuits are connected to two different chiller lines, completely independent of one another.

Dual circuit configurations are the perfect solution for applications where **Reliability**, **Safety** and **Redundancy** are paramount.

## Features

- Cooling capacity range from 30 kW to 260 kW
- Available in 14 sizes
- Available in several refrigeration systems
- Downflow and Upflow versions of units
- Simple installation and maintenance via door on the front
- Air filtering with filter class G4
- Filter control manager for a constant airflow
- ModBus onboard for integration in the building services management system

## Options

- 7 inch touch panel user interface
- Communication via SNMP/HTTP IP protocols
- Humidifier
- 3 way valve
- Smoke and fire alarms
- Eco-Cool with Direct Free Cooling
- Energy meter

## Technical Data

GCRAH Chilled Water (cw)								
MODEL		30	40	50	65	80	90	100
NET CW COOLING CAPACITY - MBH (Includes Motor Heat @ Rated CFM & ESP)								
Total <sup>1</sup>	MBH (kW)	102.3 (30)	119.4 (40)	136.4 (50)	204.7 (65)	238.8 (80)	272.9 (90)	307.1 (100)
Sensible <sup>1</sup>	MBH (kW)	102.3 (30)	119.4 (38)	136.4 (48)	204.7 (65)	238.8 (77)	272.9 (87)	307.1 (100)
Total <sup>2</sup>	MBH (kW)	102.3 (40)	119.4 (52)	136.4 (65)	204.7 (85)	238.8 (98)	272.9 (115)	307.1 (130)
Sensible <sup>2</sup>	MBH (kW)	102.3 (40)	119.4 (51)	136.4 (63)	204.7 (85)	238.8 (98)	272.9 (112)	307.1 (127)
Blower/Motor - Backward Inclined, Plenum Style Fan, with an EC Motor								
Max. Air Flow(E.S.P)	CFM (Pa)	6,000 (300)		7,000 (320)	12,000 (300)		14,000 (320)	18,000 (310)
Qt(Pcs)		1			2			3
Physical Data								
Approx. Weight (lbs)		450	460	470	870	895	916	1,300
Dimensions (W") <sup>3</sup>		23.6			47.2			70.8
MODEL		120	130	150	175	200	230	260
NET DX COOLING CAPACITY - MBH (Includes Motor Heat @ Rated CFM & ESP)								
Total <sup>1</sup>	MBH (kW)	358.2 (120)	409.4 (130)	477.7 (150)	545.9 (175)	597.1 (200)	682.4 (230)	818.9 (260)
Sensible <sup>1</sup>	MBH (kW)	358.2 (116)	409.4 (125)	477.7 (150)	545.9 (170)	597.1 (200)	682.4 (220)	818.9 (250)
Total <sup>1</sup>	MBH (kW)	358.2 (150)	409.4 (165)	477.7 (195)	545.9 (220)	597.1 (260)	682.4 (290)	818.9 (320)
Sensible <sup>1</sup>	MBH (kW)	358.2 (146)	409.4 (160)	477.7 (190)	545.9 (215)	597.1 (252)	682.4 (282)	818.9 (311)
Blower/Motor - Backward Inclined, Plenum Style Fan, with an EC Motor								
Max. Air Flow(E.S.P)	CFM (Pa)	20,000 (320)		25,000 (350)		30,000 (380)		36,000 (390)
Qt(Pcs)		3		4		5		6
Physical Data								
Approx. Weight (lbs)		1,330	1,360	1,730	1,790	2,140	2,200	2,550
Dimensions (W") <sup>3</sup>		70.8		94.4		118.0		141.6

1) Air inlet temperature: 24 °CDB; R.H. 50 %

2) Air inlet temperature: 35 °CDB; R.H. 30 %

1) CH.W.S/R: 7/12 °C

2) CH.W.S/R: 4.5/10 °C

External static fan pressure: 30 Pa

3) All Dimensions (inch) : H: 70.8", D: 23.6"

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