

True
Redundancy

Heating

Efficient

Cooling

Reliable

Simultaneous



SHConDemand®

UCH Series – Water Cooled

15, 25, 30, 50, 70 and 85 Tons – Configurable up to 1,000 Tons

Available in 208, 230, 460 & 575 Volts



SHC on
DEMAND®
SIMULTANEOUS HEATING AND COOLING

CLIMA  **COOL**®

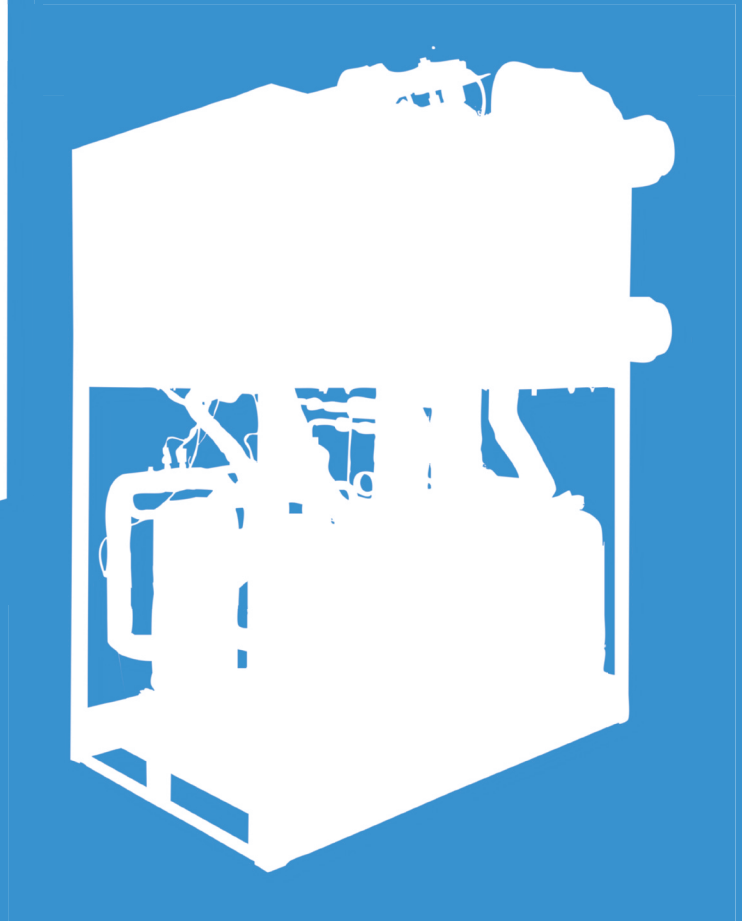
A **NIBE** GROUP MEMBER

Rev: May 18, 2023

Why throw away the heat?

ClimaCool chillers provide heating, cooling, heat recovery and heat pump technology in each module.

Leading you to a lower cost of ownership.



Protect your bottom line and the environment simultaneously

The ClimaCool® SHC onDEMAND® modular chiller helps reduce energy consumption and the environmental impact of your heating and cooling equipment by harnessing energy that is already being produced but not used.

In addition, it provides all of the functionality of a traditional boiler/chiller system while **saving 75% of the average footprint and up to 40% when compared to typical simultaneous heat pump and heat recovery systems.**

The system allows **connection flexibility** for hot, cold and source water loops. Typical simultaneous banks limit configuration options to hot and cold water on opposite ends whereas the SHC is fully **configurable to be same side or opposite side** based on your mechanical room design. Each module has the ability to be utilized for heating or cooling onDEMAND to precisely match building loads and provide compressor run time equalization.

The SHC onDEMAND® system eliminates the need to have separate equipment for heating and cooling while saving installation costs, reducing the physical footprint and overall operating costs. Innovative engineering simplifies the simultaneous heating and cooling process, taking multitasking to a whole new level.

LEED® categories satisfied by the SHC system are:

Enhanced Commissioning and Measurement and Verification

CoolLogic Control System provides maximum flexibility with BAS interface via native BACnet® communications.

Enhanced Refrigerant Management

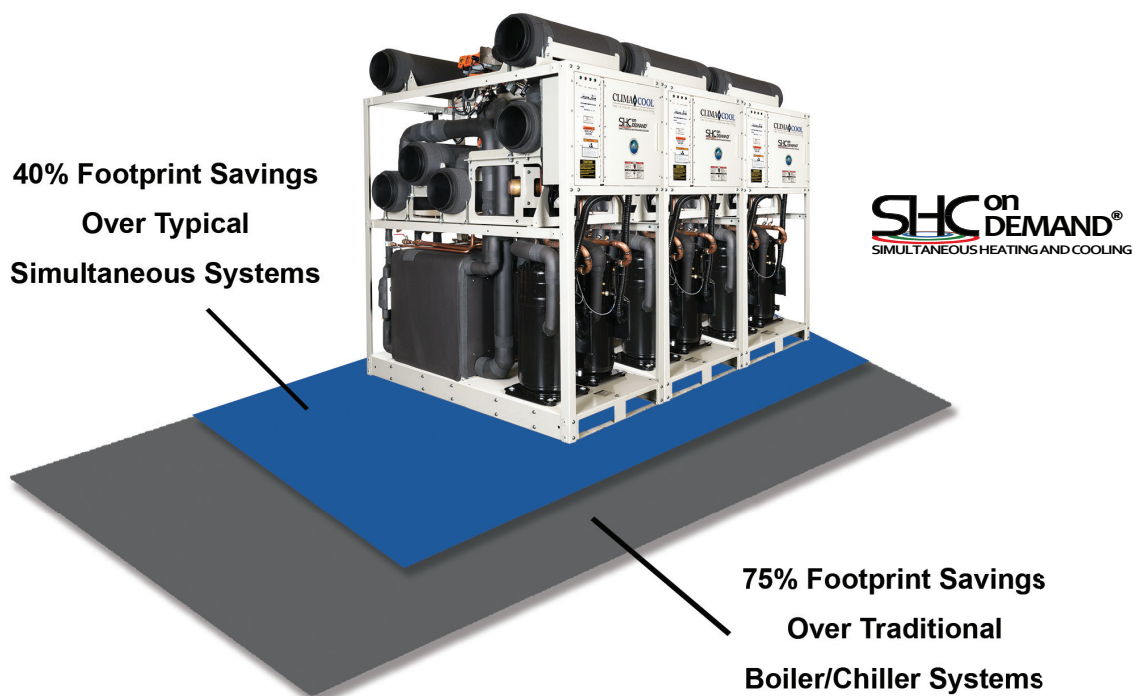
Micro charge of chlorine-free and non-ozone depleting refrigerant.

Optimized Energy Performance Exceeds ASHRAE 90.1 minimum efficiency by 30% or more.

Sustainable Sites and Building Re-Use

Compact design shrinks mechanical room and building footprint and allows modules to fit through existing doors eliminating the need for demolition and reconstruction.

Thermal Comfort Precise required heating and cooling ensures the highest comfort for building occupants.

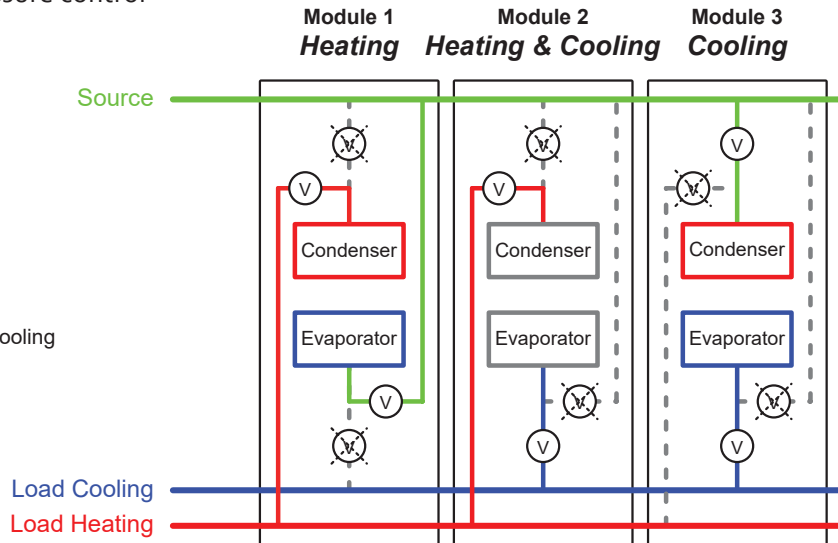


Use recovered heat to reduce energy consumption

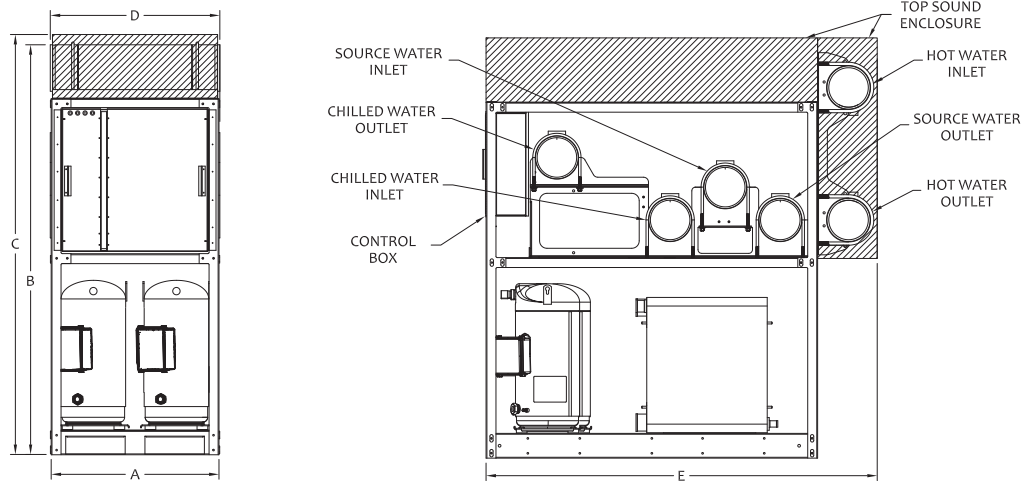
Heat Recovery Model

- Simultaneous heating/cooling available from each module
- Provides hot water up to 135° F
- Built in modulating head pressure control

Figure shows a bank of three modules:
 Module 1 in Heating
 Module 2 in Heating & Cooling
 Module 3 in Cooling



* Simplified single line water circuit shown; V = motorized isolation and control valve



MODEL UCH	VOLTAGE	A UNIT WIDTH (in.)	B HEIGHT WITHOUT SOUND ENCLOSURE (in.)	C HEIGHT WITH SOUND ENCLOSURE (in.)	D HEADER WIDTH (in.)	E UNIT DEPTH WITH SOUND ENCLOSURE (in.)	UNIT WEIGHT ¹ (lb.)	OPERATING WEIGHT ² (lb.)	HEADER CONNECTION SIZE ³ (in.)
015	208/230/460/575/3/60	34	78 7/8	80	34 1/4	66	1575	1895	6
025	208/230/460/575/3/60	34	78 7/8	80	34 1/4	66	1690	2010	6
030	208/230/460/575/3/60	34	78 7/8	80	34 1/4	66	1695	2015	6
050	208/230/460/575/3/60	34	78 7/8	80	34 1/4	66	2460	2770	6
070	208/230/460/575/3/60	34	78 7/8	80	34 1/4	66	2600	2910	6
085	208/230/460/575/3/60	34	82 3/4	84 7/8	34 1/4	79	3050	3550	8

Notes:

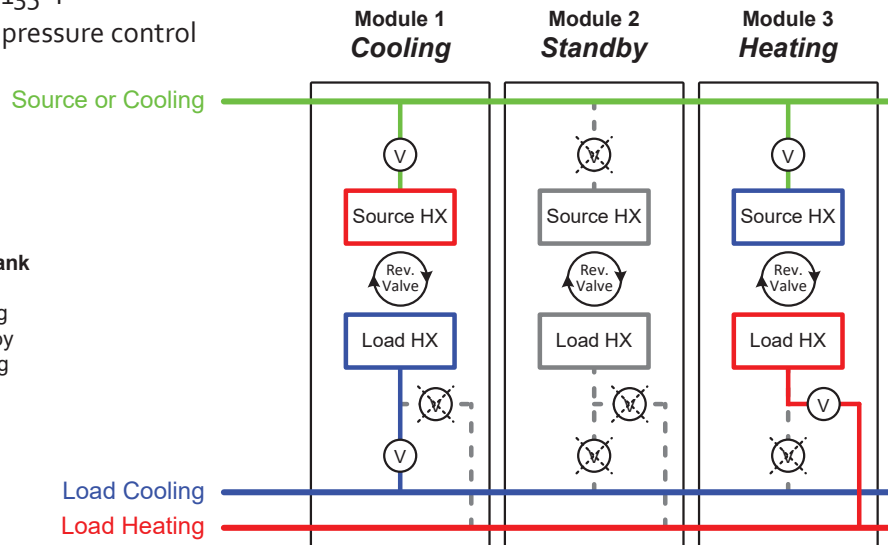
1. Unit shipping weight includes refrigerant charge, compressor oil and packaging.
2. Operational weight includes refrigerant charge, compressor oil and water.
3. The model UCH085 cannot be directly coupled with model UCH015, 025, 030, 050 or 070 due to differences in header and frame size.

Index any module for heating or cooling at ANY time

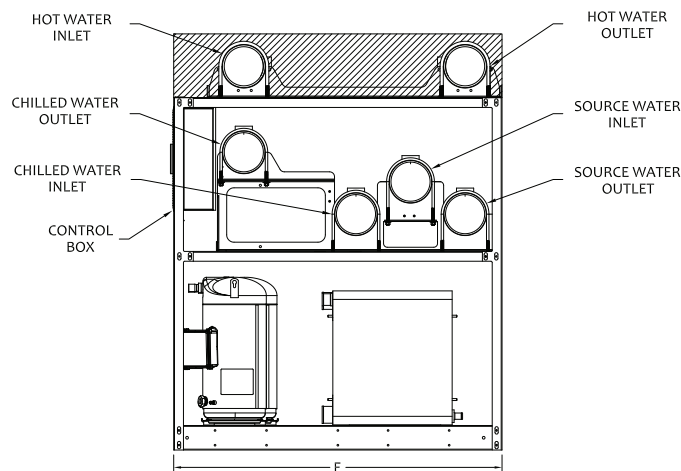
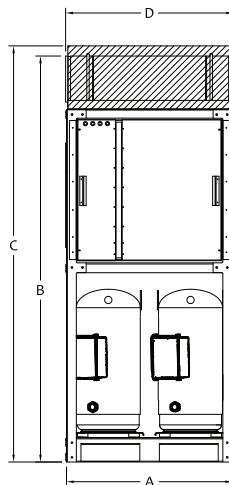
Heat Pump Model

- Lower compression ratios due to operation at neutral source temperatures
- No mixing of source and load liquids (water/glycol) solutions
- Provides hot water up to 135° F
- Built in modulating head pressure control

Figure shows a bank of three modules:
Module 1 in Cooling
Module 2 in Standby
Module 3 in Heating



* Simplified single line water circuit shown; V = motorized isolation and control valve



MODEL UCH	VOLTAGE	A UNIT WIDTH (in.)	B HEIGHT WITHOUT SOUND ENCLOSURE (in.)	C HEIGHT WITH SOUND ENCLOSURE (in.)	D HEADER WIDTH (in.)	E UNIT DEPTH (in.)	UNIT WEIGHT ¹ (lb.)	OPERATING WEIGHT ² (lb.)	HEADER CONNECTION SIZE ³ (in.)
015	208/230/460/575/3/60	34	76 7/8	78	34 1/4	55 1/2	1510	1830	6
025	208/230/460/575/3/60	34	76 7/8	78	34 1/4	55 1/2	1625	1945	6
030	208/230/460/575/3/60	34	76 7/8	78	34 1/4	55 1/2	1630	1950	6
050	208/230/460/575/3/60	34	76 7/8	78	34 1/4	55 1/2	2250	2560	6
070	208/230/460/575/3/60	34	76 7/8	78	34 1/4	55 1/2	2500	2810	6
085	208/230/460/575/3/60	34	83 3/8	84 7/8	34 1/4	67	2980	3480	8

Notes:

1. Unit shipping weight includes refrigerant charge, compressor oil and packaging.
2. Operational weight includes refrigerant charge, compressor oil and water.
3. The model UCH085 cannot be directly coupled with model UCH015, 025, 030, 050 or 070 due to differences in header and frame size.

Produce heating, cooling and hot water from a single unit

Flexibility The 6 header design can be applied with cooling towers, geothermal (ground and lake) loops, or hybrid systems for true system flexibility. Cooling, heating and source piping configuration is available on same or opposite ends which allows for numerous piping layouts. Bank sizes range from 15 to 1,000 tons to ensure load demands are met efficiently.

onDEMAND Operation Allows any module to be indexed for heating or cooling regardless of its position in the bank, providing optimum module/compressor run time equalization.

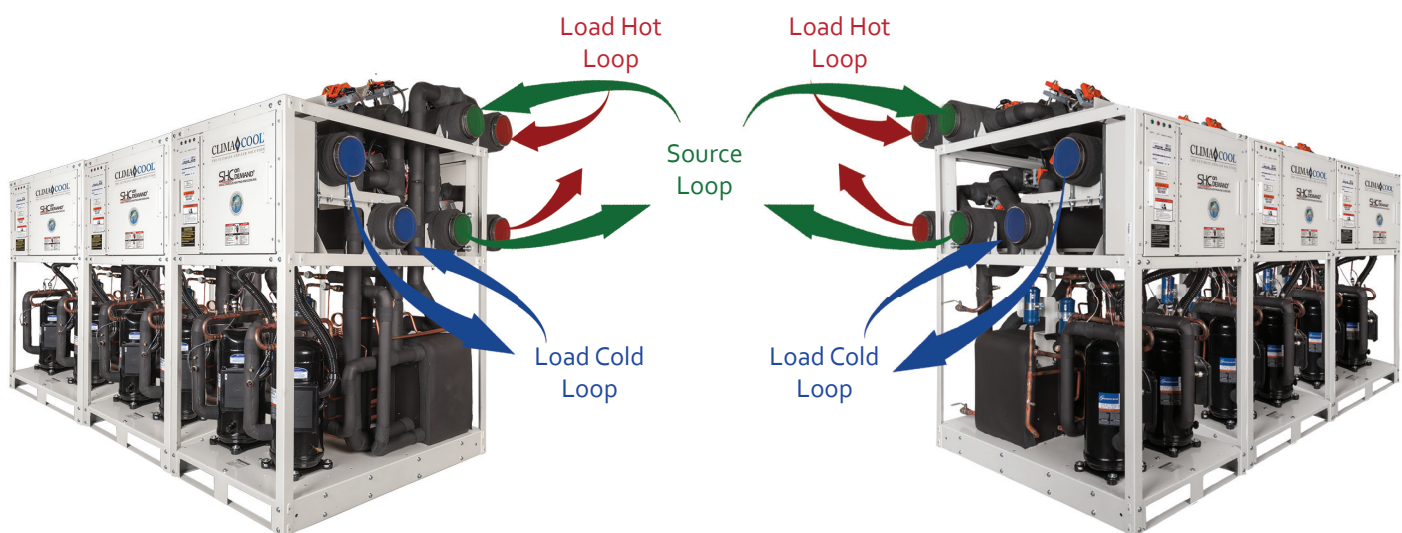
Simplicity 6 header design simplifies installation, design and controls. Simultaneously, the SHC satisfies required heating and cooling demands without the use of inter-module/external header isolation valves, controls, associated logic, piping or wiring.

Dramatic Energy Savings Eliminate the need for separate heating and cooling systems thus saving installation cost, overall operating cost, reducing physical footprint while potentially **lowering system energy costs by more than 50%** when compared to traditional boiler/chiller systems.

Compact No more need for bulky chiller systems and large boiler room equipment. The SHC provides the functionality of both in a minimal footprint. Patent pending 6 header design eliminates the required space between and external to the modules. This creates the **smallest system operating footprint** when compared to a typical simultaneous system and allows for same end piping connections. Modular 6 pipe design allows access through standard 36" doorways and onto typical freight elevators.

Ultimate Efficiency The *CoolLogic* Control System provides advanced algorithms for maintaining precise leaving chilled and hot water temperatures. Integral motorized valves allow for variable pumping on heating, cooling and source water loops. High efficiency design offers cooling efficiencies up to 25 EER and heating efficiencies up to 5 COP.

True Redundancy Separate module electrical feeds provide true electrical redundancy. Integral motorized isolation valves and dual independent/refrigerant circuits per module provide true mechanical redundancy.





Kent State University | Kent, OH

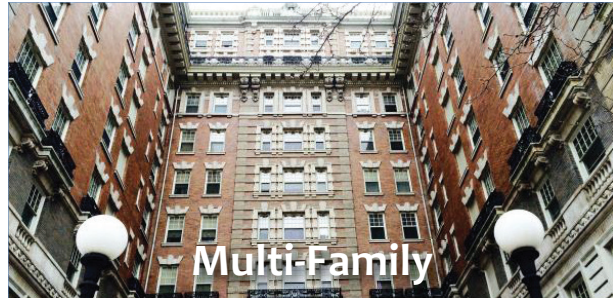
Market Applications



Briarwood Elementary



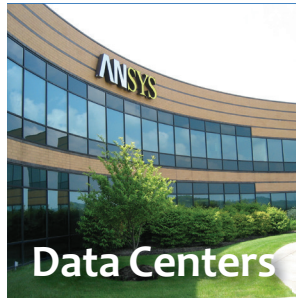
Ditch Witch



Marlborough Apartments



Great Northern Hotel



Ansys, Inc.



World Trade Center



Birch Bay Courthouse



Central Park Tower



Statue of Liberty



Northeast Georgia Health Systems

Contact your local ClimaCool representative or visit our web site at www.climacoolcorp.com to find out more about the heating and cooling solutions that may fit your application needs.



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