



FLEXIBILITY ■

SIMPLICITY ■

SUSTAINABILITY ■

ON DEMAND ■

DRAMATIC
ENERGY SAVINGS

COMPACT ■

TRUE
REDUNDANCY

SHC ON DEMAND™

SIMULTANEOUS HEATING AND COOLING HEAT PUMP - MODEL UCH 30, 50, 70 AND 85
SIMULTANEOUS HEATING AND COOLING HEAT RECOVERY - MODEL UCH 30, 50, 70 AND 85
GEOTHERMAL CENTRAL PLANT - CONFIGURABLE UP TO 1,000 TONS PER BANK
AVAILABLE IN 208, 230, 460 AND 575 VOLTS

PATENT PENDING



CLIMA COOL®
THE ULTIMATE CHILLER SOLUTION®



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.

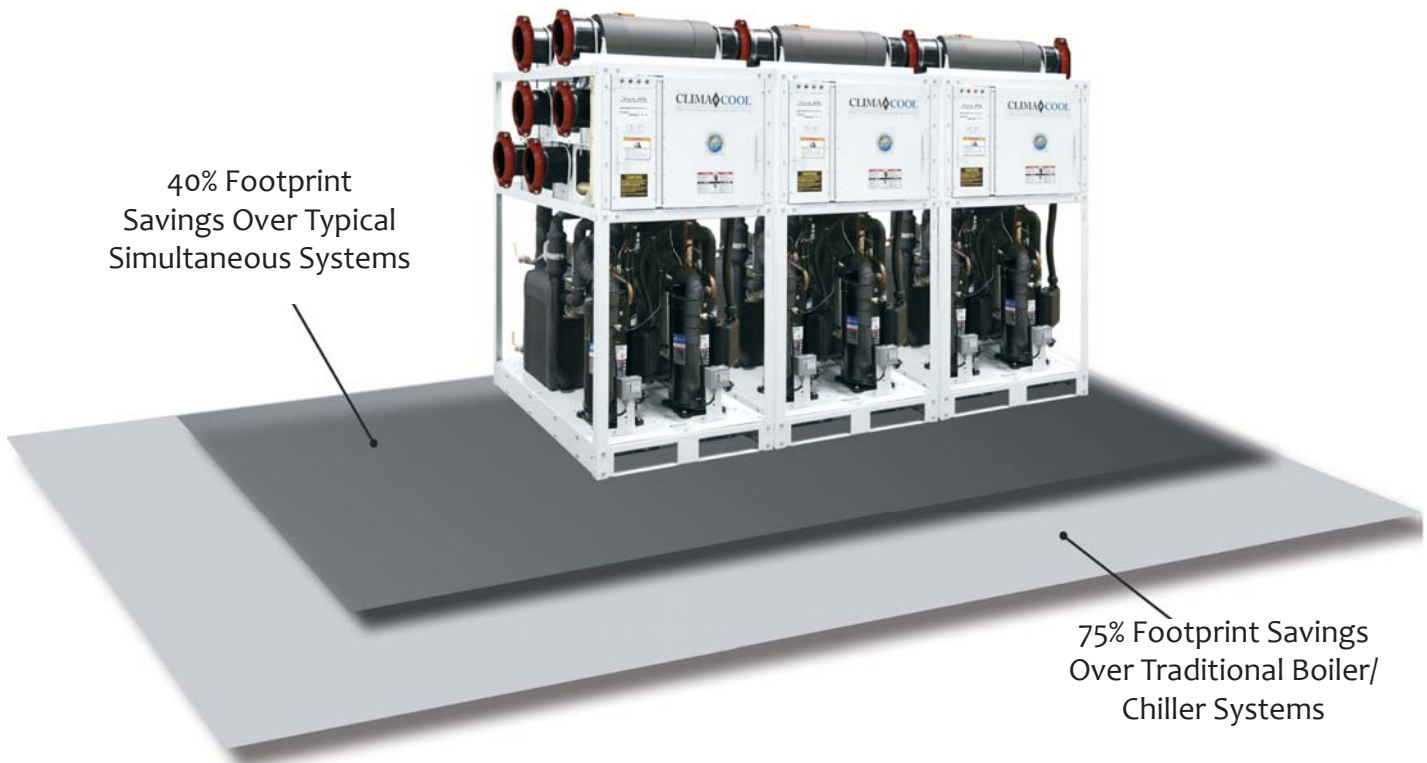
In addition, it provides all of the functionality of a traditional boiler/chiller system while **saving 75% of the average footprint and up to 40% when compared to typical simultaneous heat pump systems.**

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:

- **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.
- **Enhanced Commissioning and Measurement and Verification**
CoolLogic Control System provides maximum flexibility with BAS interface via native BACnet, LonWorks, Modbus and N2 communications.
- **Optimized Energy Performance**
Exceeds ASHRAE 90.1 minimum efficiency by 30% or more.
- **Enhanced Refrigerant Management**
Micro charge, amounting to less than one pound per ton, of chlorine-free and non-ozone depleting refrigerant.
- **Thermal Comfort**
Precise required heating and cooling ensures the highest comfort for building occupants.



Produce heating, cooling and hot water from a single unit

Benefits:

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 30 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.

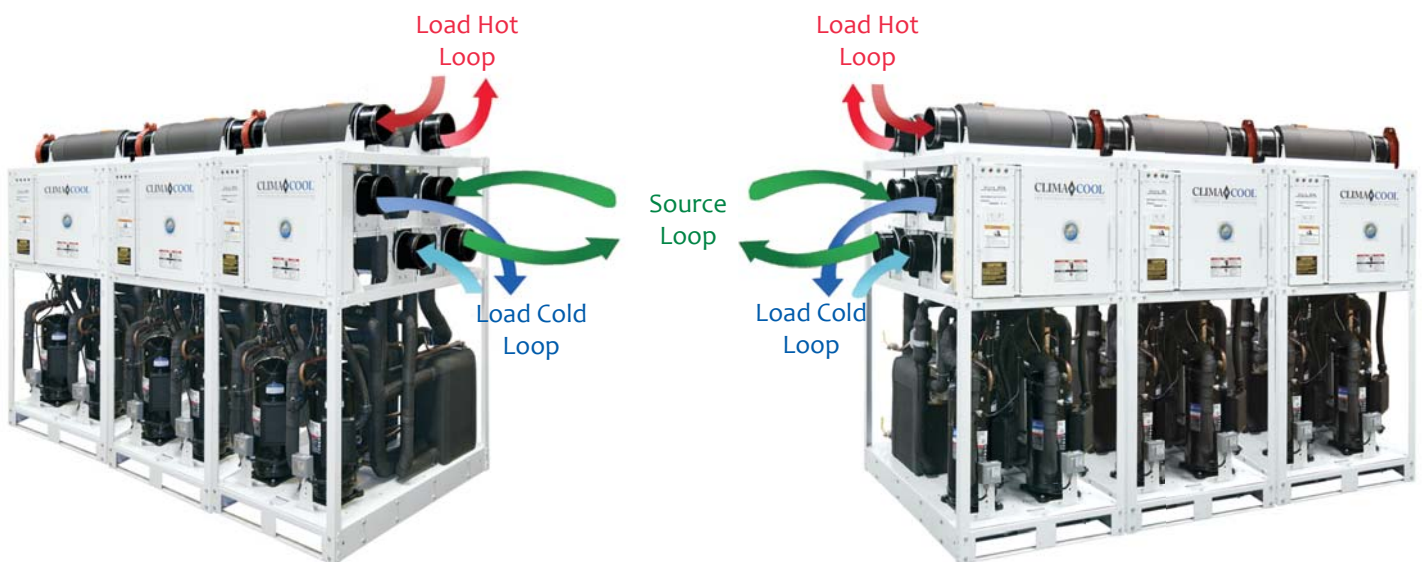
Simplicity 6 header design simplifies installation, design and controls. Simultaneously, the SHC satisfies required heating and cooling demands without the use of inter-module/external header isolation valves, controls, associated logic, piping or wiring.

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.

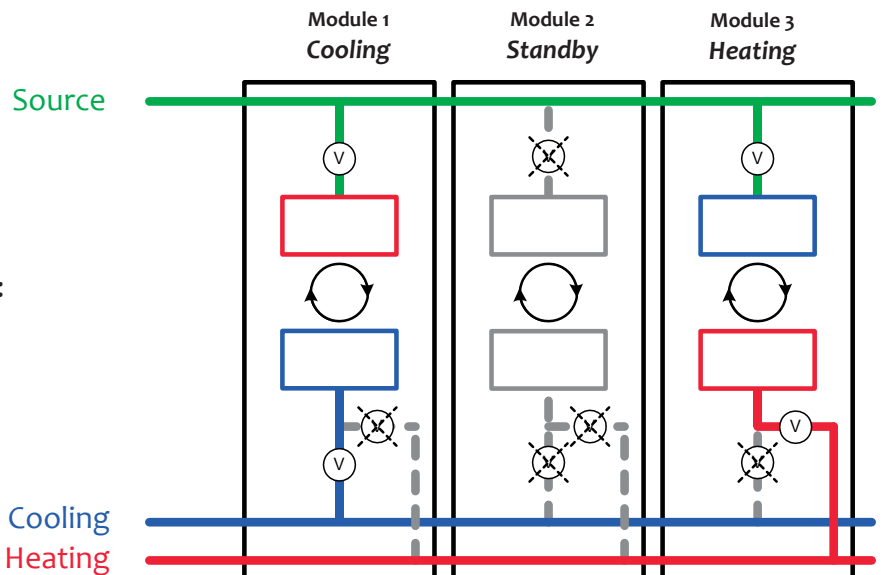


Any module can be indexed for heating or cooling at ANY time

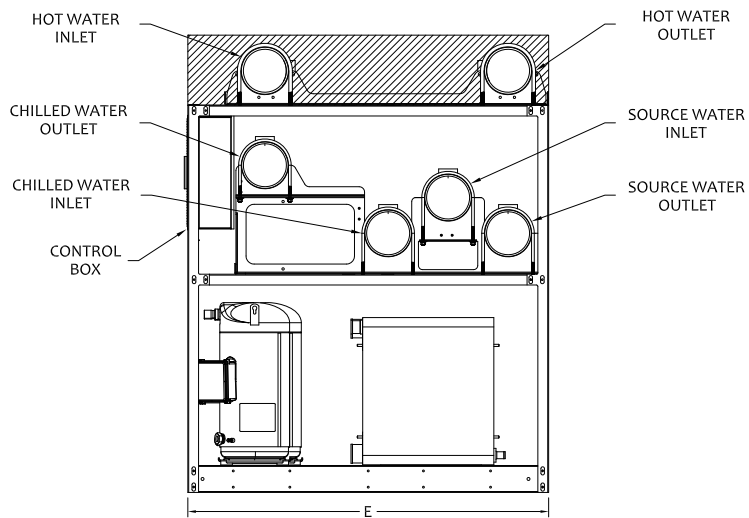
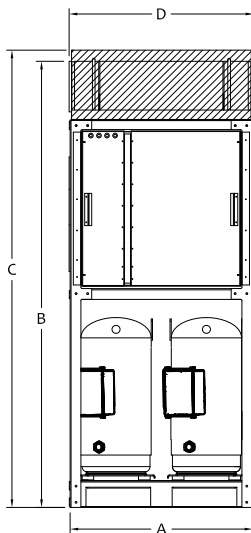
Heat Pump Model:

- Lower compression ratios due to operation at neutral source temperatures
- Provides hot water, as high as 135°, utilizing R-410A refrigerant and 170° utilizing R-134a refrigerant
- Built in modulating head pressure control
- No mixing of source and load liquids (water/glycol) solutions

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	B HEIGHT WITHOUT SOUND ENCLOSURE	C HEIGHT WITH SOUND ENCLOSURE	D HEADER WIDTH	E UNIT DEPTH	UNIT WEIGHT ¹ (lbs)	OPERATING WEIGHT ² (lbs)	HEADER CONNECTION SIZE ³
030	208/230/460/575/3/60	34"	76 7/8"	78"	34 1/4"	55 1/2"	1530	1850	6"
050	208/230/460/575/3/60	34"	76 7/8"	78"	34 1/4"	55 1/2"	2150	2460	6"
070	208/230/460/575/3/60	34"	76 7/8"	78"	34 1/4"	55 1/2"	2400	2710	6"
085	208/230/460/575/3/60	34"	83 7/8"	84 7/8"	34 1/4"	67"	2850	3350	8"

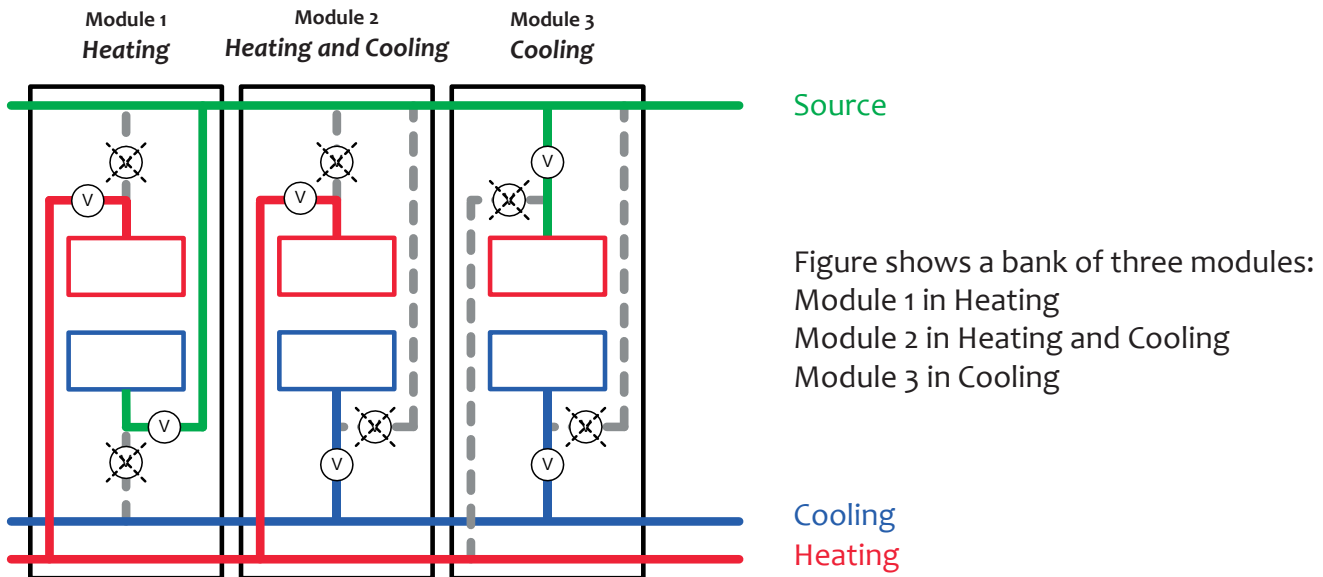
Notes:

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 UCH030, 050 or 070 due to differences in header and frame size.

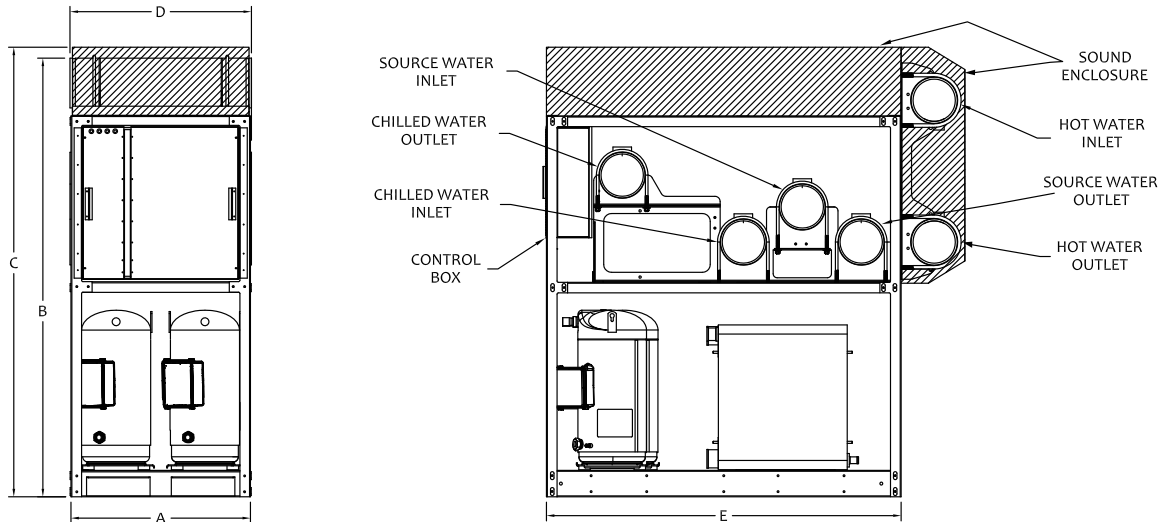
Utilize free heat to reduce energy consumption

Heat Recovery Model:

- Simultaneous heating/cooling available from each module
- Provides hot water, as high as 135°, utilizing R-410A refrigerant and 170° utilizing R-134a refrigerant
- Built in modulating head pressure control



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



MODEL UCH	VOLTAGE	A UNIT WIDTH	B HEIGHT WITHOUT SOUND ENCLOSURE	C HEIGHT WITH SOUND ENCLOSURE	D HEADER WIDTH	E UNIT DEPTH	UNIT WEIGHT ¹ (lbs)	OPERATING WEIGHT ² (lbs)	HEADER CONNECTION SIZE ³
030	208/230/460/575/3/60	34"	78 7/8"	80"	34 1/4"	55 1/2"	1530	1850	6"
050	208/230/460/575/3/60	34"	78 7/8"	80"	34 1/4"	55 1/2"	2150	2460	6"
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Contact your local ClimaCool representative or visit our website at www.climacoolcorp.com to find out more about SHC onDEMAND and other heating and cooling solutions that may fit your application needs.



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