

SEVERN

WATER SOURCE HEAT



TRANSOM

ELECTRIFICATION BOILER

BOILER REPLACEMENT 180°F

CAPACITIES UP TO 1100 MBH

**MODULAR DESIGN FOR HIGHER CAPACITY
12 x 1100 = 13,200 MBH**

MAIN FEATURES

- DOUBLE WALLED CONDENSER
- WATER SOURCE BRAZED PLATE
- DUAL STAGE/CIRCUIT
- ELECTRONIC TX VALVE
- HEAD PRESSURE CONTROL
- CAPACITY CONTROL
- SMALL FOOTPRINT
- FRONT SERVICE ACCESS





The **Severn water sourced heat pump** is available for potable hot water duty or as a boiler. It is a dedicated water source heat pump specifically designed for high temperature (180°F).

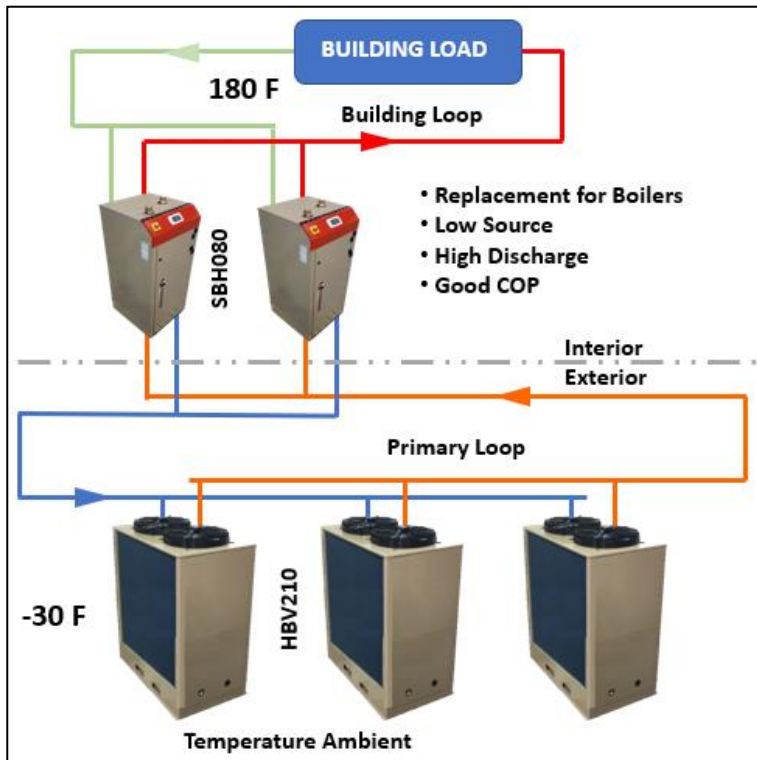
The Severn HP is set up to use a wide variety of sources of heat, such as cooling tower water and exhaust air recovery coils.

Multiple units can be used to increase capacity and add redundancy. (N+1)

OPERATING RANGE

The vapour injected scroll compressor will give a large ambient temperature operating range with supply water temperature set point adjustable from 90°F to 180°F.

The Severn water sourced heat pump can operate from 30°F to over 120°F ambient temperature.



CAPACITY CONTROL

The Severn unit has a variety of methods to control leaving water temperature (LWT).

It allows for staging of the compressors. There is also a bypass loop that controls the LWT, as well as control of the head pressure.

Using multiple unit modular system allows for larger installed systems as well as greater turn down.

CASCADE SYSTEMS

For high temp boiler application, the Severn HP and the Hatch HP can be used in a cascade system. This would allow 180°F water to be generated from -30°F ambient conditions.

The air source heat pump would generate 100°F fluid in an intermediate loop. The Severn water sourced heat pump would then use this as its source and in turn generate 180F LWT.

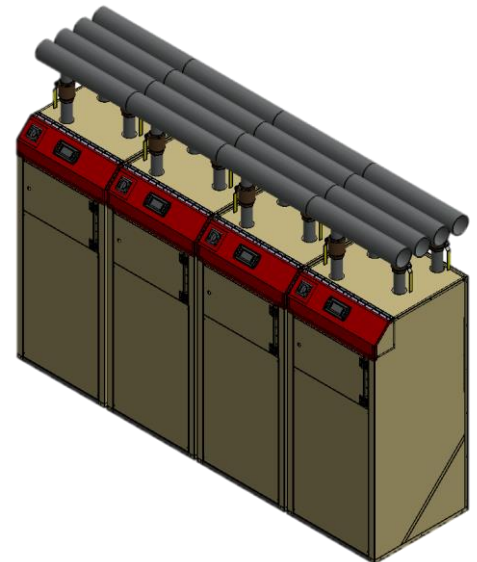
The Severn water to water heat pumps can be placed indoors allowing for the circulation loop through the building to be 100% water.

The Master controller would stage all the units and set points as the ambient varies.



SMALL FOOTPRINT

The Severn heat pump is design so that it is front serviceable. This way multiple units can be placed next to each other inside the mechanical room.



Heat	SBH080	SBH100	SBH150	SBH200	SBH250	SBH300
Load LWT (F)	180	180	180	180	180	180
Source EWT (F)	105	105	105	105	105	105
Load Cap (MBH)	286	376	558	721	900	1105
Power In (kW)	20.8	26.5	42.4	55.6	68.7	84.3
COP	4.0	4.2	3.9	3.8	3.8	3.8

Hot Water	SWH080	SWH100	SWH150	SWH200	SWH250	SWH300
Load LWT (F)	140	140	140	140	140	140
Source EWT (F)	55	55	55	55	55	55
Load Cap (MBH)	150	204	304	393	494	602
Power In (kW)	13	16.7	25.8	33.7	42.7	51.4
COP	3.4	3.6	3.5	3.4	3.4	3.4



Configuration SBH080 to 180



Configuration SBH200 to 300

POWER
208-230/3/60
460/3/60
575/3/60

	S_H080	S_H100	S_H150	S_H200	S_H250	S_H300
width (in)	28	28	28	34	34	34
depth (in)	32	32	32	36	36	36
height (in)	64	64	64	78	78	78
weight (lb)	850	960	1100	1650	1780	1850



FRONT SERVICEABLE
Severn unit shown with Service panel removed and control panel door open



FRONT SERVICEABLE
Power Panel hinged open
Control panel swung open for full access

Major Components

- High Temp scroll Compressors
- Two independent circuits
 - Fluid line includes flow switch
 - Refrigerant line includes filter drier, solenoid, and sight glass
 - Electronic TX valve and controller for better control over large operating range
 - Braze Plate heat exchangers.
 - Double walled used on SWH model
 - Microprocessor controller c/w temperature and pressure sensors

The unit is factory charged and tested before shipping. This way the installation only has the final functions remaining to be done at site.

Other Products



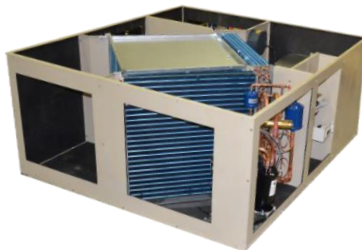
TRENT CHILLER

- Capacities available from 2 to 7 ton
- Year-round operation
- Floating head pressure control
- 2 Stage scroll compressors
- Energy savings features
- Low temperature kit included
- Brazed Plate HX
- Built-in centrifugal pump
- Flow switch
- Swept fan blade design
- Variable speed fan
- Hydrophobic coated coil



LAMBERT CHILLER

- Capacities available in **20 to 80 ton**
- Up to 12 modules
- Redundancy N+1, N+2
- Capacity control
- High turn down
- Brazed plate heat exch.
- Water cooled
- Pre-made modular header
- Scroll compressors, dual circuit
- Smallest footprint



RAWSON CHILLER

- Capacities available from 10 to 80 ton
- Year-round operation
- 2 Stage control
- Energy saving features
- Low temperature kit included
- Brazed Plate HX
- Built-in centrifugal pump
- Flow switch
- Swept fan blade design

TOPAZ MHP

- Heat Recovery and Heat Pump unit
- 250- 3200 CFM
- Flat Plate HX recovers most of the heat
- Heat Pump generates higher heat
- EC backwards curved blowers
- Tube and fin heat pump coils
- Defrost accessories
- Indoor and Outdoor model



SEVERN WSHP

High Temp Water Sourced Heat Pump

- Capacities up to 600 MBH
- 180F Leaving Water Temp
- Operating range 30 to 110 F
- Cascade system
- Staged capacity
- Potable water or boiler
- Modular configuration
- Reversing
- Front serviceable



SIMCOE ASHP

CO2 High Temp Air Sourced Heat Pump

- Capacities up to 600 MBH
- 140F Leaving Water Temp
- Operating range -30 to 120 F
- Variable capacity
- Potable water to boiler
- Modular configuration
- Back up elec heater
- Integral Pump
- Reversing
- High static blower option



HATCH ASHP

High Temp Air Sourced Heat Pump

- Capacities up to 300 MBH
- 140F Leaving Water Temp
- Operating range -20 to 110 F
- Variable capacity
- Potable water to boiler
- Modular configuration
- Back up elec heater
- Integral Pump
- Reversing
- High static blower option