Ductless Split Ceiling Cassette
Ductless Mini-Split Models SSD, SSH and SCW
Introduction

The Modine Cassette units effectively make each area served an independent controlled temperature zone. Through thermostatic control of operations, conditions can be varied to suit diverse requirements or activities. Optional fresh air intakes are available to provide for ventilation and recirculation of room air.

Modine Cassettes are available in a choice of three models – DX cooling and heat pumps in five model sizes and chilled water cooling in six model sizes – to properly match units to job requirements. Optional heating can be provided by factory installed electric heat or hot water modules, depending on model. This versatility eliminates compromising architecture or design. Important cost savings are often realized during building modernizations, as existing piping and/or wiring can frequently be reused.

Design techniques are incorporated in every Modine Cassette to reduce noise levels to an absolute minimum. These techniques include low blower speeds, rigid panel and cabinet construction, and sound-absorbent cabinet insulation.

For individual comfort, Modine Cassettes are available with electro-mechanical or micro-processor based controls. The micro-processor controller includes an infrared transmitter which enables room conditions to be maintained at a user defined set point. Modine Cassettes are also available with Carel microprocessor controls and network cards to allow units to be connected to a Building Management System.

Table of Contents

<table>
<thead>
<tr>
<th>Model Identification</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Description</td>
<td></td>
</tr>
<tr>
<td>Standard Features</td>
<td>3</td>
</tr>
<tr>
<td>Options</td>
<td>4</td>
</tr>
<tr>
<td>Accessories</td>
<td>5</td>
</tr>
<tr>
<td>Capacity Data</td>
<td></td>
</tr>
<tr>
<td>Air Conditioning and Heat Pump Units</td>
<td>6</td>
</tr>
<tr>
<td>Chilled Water Units</td>
<td>7</td>
</tr>
<tr>
<td>Optional Water Coil and Two Pipe Systems</td>
<td>8</td>
</tr>
<tr>
<td>Dimensional Data</td>
<td></td>
</tr>
<tr>
<td>Small Chassis – SCW2/8, and SCW2/12</td>
<td>9</td>
</tr>
<tr>
<td>Medium Chassis – SCW 18 and SCW 20</td>
<td>10</td>
</tr>
<tr>
<td>Large Chassis – SCW 33 and SCW 36</td>
<td>11</td>
</tr>
<tr>
<td>Medium Chassis – SSD/SSH 18 and SSD/SSH 24</td>
<td>12</td>
</tr>
<tr>
<td>Large Chassis – SSD/SSH 30, SSD/SSH 36 and SSD/SSH 42</td>
<td>13</td>
</tr>
<tr>
<td>Technical Data</td>
<td></td>
</tr>
<tr>
<td>Technical Data – Air Conditioning and Heat Pump Units</td>
<td>14</td>
</tr>
<tr>
<td>Technical Data – Chilled Water Units</td>
<td>15</td>
</tr>
<tr>
<td>Technical Data – Condensers for Air Conditioning Unit Systems</td>
<td>16</td>
</tr>
<tr>
<td>Technical Data – Condensers for Heat Pump Unit Systems</td>
<td>17</td>
</tr>
<tr>
<td>Electrical Data</td>
<td>18-19</td>
</tr>
<tr>
<td>Sound Data</td>
<td>19-20</td>
</tr>
<tr>
<td>Condenser Information</td>
<td></td>
</tr>
<tr>
<td>Features – Air Conditioning System Condenser Units</td>
<td>21-22</td>
</tr>
<tr>
<td>Features – Heat Pump System Condenser Units</td>
<td>23</td>
</tr>
</tbody>
</table>

Modine has a continuous product improvement program and therefore reserves the right to change design and specifications without notice.
General Description

<table>
<thead>
<tr>
<th>MODELL IDENTIFICATION</th>
<th>CEILING CASSETTE UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSD, SSH or SCW</td>
<td><strong>Base Model:</strong></td>
</tr>
<tr>
<td></td>
<td>SSD = Ceiling Cassette Unit – DX Cooling</td>
</tr>
<tr>
<td></td>
<td>SSH = Ceiling Cassette Unit – Heat Pump</td>
</tr>
<tr>
<td></td>
<td>SCW = Ceiling Cassette Unit – Chilled Water</td>
</tr>
<tr>
<td>2/ or _ (blank)</td>
<td><strong>Cabinet Size:</strong></td>
</tr>
<tr>
<td></td>
<td>2/ = Small Body (2 X 2 Series)</td>
</tr>
<tr>
<td></td>
<td>_ = Medium Body (3 X 3 Series) or Large Body (3 X 4 Series)</td>
</tr>
<tr>
<td>8 to 42</td>
<td><strong>Model Size:</strong> Nominal Cooling in Mbtu (See Performance Data for Details)</td>
</tr>
<tr>
<td>EM, MC or CA</td>
<td><strong>Control Type:</strong></td>
</tr>
<tr>
<td></td>
<td>EM = Electro-Mechanical Control</td>
</tr>
<tr>
<td></td>
<td>MC = Microprocessor Controlled – Remote Control via Infrared or Pendant</td>
</tr>
<tr>
<td></td>
<td>CA = Carel Controller</td>
</tr>
<tr>
<td>Example: SSD 18EM</td>
<td>Ceiling Cassette Unit, DX Cooling, 18,000 Nominal BTU/Hr, Electro-Mechanical Control</td>
</tr>
</tbody>
</table>

STANDARD FEATURES

Construction
Cases are manufactured from lightweight galvanized sheet steel with integral fan mounting rails for added strength. Fire resistant foam insulation (to UL94 VO) is fitted internally to provide both thermal and acoustic insulation.

Evaporator
All direct expansion units include a factory installed thermal expansion valve and utilize large surface area evaporator coils ideally positioned to optimize heat transfer and airflow. Each evaporator is manufactured from refrigeration quality copper tubes with mechanically bonded aluminum fins.

Chilled Water Coil
All chilled water units utilize large surface area coils positioned to optimize heat transfer and airflow. Each coil is manufactured from refrigeration quality copper tubes with mechanically bonded aluminum fins and are circuited from headers to ensure low water pressure drops.

Fan
All units, utilizing backward curved centrifugal fans, are statically and dynamically balanced for quiet operation. Fan impellers are made from either aluminum or fire retardant plastic (UL94 VO) for light weight and corrosion resistant operation. Fans are driven by an enclosed multi-speed external rotor motor allowing good heat dissipation and an increased motor efficiency. Fans come complete with thermal overload protection and sealed-for-life lubricated bearings.

Filtration
Wire framed filters are fitted. These are re-usable and may be vacuum cleaned.

Condensate Pump
A condensate pump and check valve are fitted to carry water out of the unit and stop water from flowing back into the condensate tray. The pump is fixed to a mounting bracket which can be withdrawn from the side of the chassis and incorporates an inspection hole to allow a visual check of the pump during operation. A float switch is fitted to stop the cooling action should the pump become blocked or fail.

Air Vanes
Air outlet vanes are designed to prevent condensation from forming. Vanes are manually adjustable on the 2 x 2 model units but driven by an electric motor on all other model units. Where fitted, the motorized air vanes can be set to auto sweep or can be stopped in a fixed position. Polystyrene blanking pieces are supplied with Cassette packing so that up to two fascia discharge slots can be blanked off.

Alarm Status Relay
The unit shall include a relay for unit failure notification. Normally open contact available for field connection.

Start / Stop Terminals
The unit shall include terminals for remote start/stop of the unit. The unit is enabled when contact between the terminals is closed. (only on Electro-Mechanical controls)
General Description

FACTORY INSTALLED OPTIONS

Controls Option 1: Electro-Mechanical
The unit shall be factory wired with an electro-mechanical control system that includes the necessary relays and safety switches for proper unit operation. Terminal strip provide at the unit for the wiring of a 24V wall mounted thermostat required for unit operation.

Controls Option 2: Microprocessor
A custom designed microprocessor is fitted to the Modine Cassette to enable room conditions to be maintained at a user defined set point. Communication to the controller is by a hand held infrared transmitter or a wall mounted ‘pendant’ transmitter. Each type of transmitter includes a wall mounting bracket as standard.

Note: Units with Microprocessor controls can not be connected to a BMS. Select the Electro-Mechanical controls option, for field installed BMS interface, or the Carel controller version with optional Lonworks and BACnet network cards.

The microprocessor allows five operating modes: fan only, dry cooling, cooling only, heating only, and heating/cooling with auto changeover for maximum versatility. A temperature set point between 58ºF and 90ºF can be selected.

The microprocessor monitors indoor coil temperature and return air temperature. The receiver contains a self diagnostic feature. When a low indoor coil temperature is detected the cooling action is stopped. If a sensor fails then an alarm is displayed on the fascia mounted receiver. The microprocessor also limits the number of compressor starts per hour to reduce wear on the compressor.

The infrared/pendant transmitter is used to switch the unit ON/OFF, change temperature settings, fan speed, operating mode, and to toggle the motorized air sweep (where fitted). The microprocessor also has a built-in clock which can be activated to enable the unit to be programmed with up to two separate operating periods on weekdays (Mon-Fn).

The clock provides ON/OFF unit operation and is not a night set back or occupied/unoccupied control function. Mon-Fri will operate as a ‘block’ of days and cannot be programmed independently of one another. Saturdays and Sundays can each be programmed with up to two separate operating periods and are programmed independently of the weekdays and each other.

A fascia mounted receiver displays ON/OFF, cool or heat, and timer/alarm status.

Controls Option 3: Carel Controller
The unit shall be fitted with a programmable microprocessor controller designed to operate the unit according to pre-engineered control strategies. The Carel controller requires a wall sensor, wall stat or network interface card.

LonWorks Card for Carel Controller
The Carel microprocessor controller shall come equipped with a plug-in card allowing for complete compatibility with FT-10 LonWorks control system.

BACnet Card for Carel Controller
The Carel microprocessor controller shall come equipped with a plug-in card allowing for complete compatibility with an MS/TP BACnet control system.

Time Clock Card for Carel Controller
A time clock (card) shall be provided for “stand-alone” units where time functions, night and weekend setback, etc. are not transmitted from a building management system or remote central time clock. The time clock shall have a full 7 day schedule and calendar function incorporated. The 7 day schedule shall have two adjustable occupied/unoccupied periods per day. The calendar function shall allow 20 calendar periods (start date / stop date = 1 period).

Electric Heat
Electric heating elements will be factory fitted to the unit. Elements are manufactured for maximum surface area and lower working temperature for improved reliability. Thermal cut out protection switches are fitted to the electric heat circuit to protect against overheating.

Hot Water Coil
A hot water heating coil will be factory fitted (depending on unit size) in addition to the standard DX or chilled water coil to provide heating. The coil is manufactured from refrigeration quality copper tubes with mechanically bonded aluminum fins.

Hot Water Coil Freeze Protection
The unit shall be fitted with a freeze protection sensor to prevent freezing of the hot water coil assembly. When the sensor detects a freeze up condition it will force the flow control valve open and prevent the unit fan(s) from running.

Disconnect Switch
The unit shall be fitted with a power disconnect switch located on the control panel, sized for the full load amperage of the unit to enable the unit to be disconnected from the power supply prior to any maintenance.

Step Up Transformer
The unit shall be fitted with a 115V to 230V step up transformer for 115V supply power. Note: This option is not available for units with Electric Heat.

Wall Mounted Pendant
The unit shall include a wall mounted pendant for communication to the microprocessor controller. The pendant replaces the standard infrared remote control.
FIELD INSTALLED ACCESSORIES

Thermostats
- Aquastat
- Mechanical thermostat: cooling only
- Mechanical thermostat with manual changeover: cooling + 1 stage of heat
- Digital thermostat with auto changeover: up to 2 stages of cooling and heating
- Digital programmable thermostat with auto changeover: up to 2 stages of cooling and heating

Carel Wall Sensor
For units fitted with the Carel microprocessor controller, a temperature sensor and set point adjustment module with override button shall be mounted on the wall.

Carel Wall Stat
For units fitted with the Carel microprocessor controller, a digital thermostat shall be mounted on the wall.

Display Module
For units fitted with the Carel microprocessor controller, a hand-held display module shall be supplied for set point changes, control adjustments and unit troubleshooting. Note: at least one display module per facility is recommended.

Spare Filters
One set of replacement filters.

Fresh Air Duct Collars
The Cassette chassis features two or three fresh air knockouts depending on model size. Any number can be removed to allow fresh air to enter the unit. A duct collar is available for fastening to the unit to allow connection of a 3” flexible duct. A replacement filter is included with fresh air duct collars to aid in balancing the amount of return air and fresh air delivered to the unit’s coil.

Supply Air Duct Collars
A limited amount of conditioned air can be ducted from the unit by removing the branch duct knockouts (up to 2 per unit) and connecting flexible ducting. In the case of the 2 x 2 model units, there are a total of three knockouts positioned on three of the unit sides (one per side). In the case of the other model units, a total of four knockouts are available and are arranged in pairs along two of the unit sides (two per side). A duct collar is available to allow connection of a 5” or 6” (depending on units size) flexible duct to the Cassette.

On the 2 x 2 range of units, it is recommended that only one of the three branch duct knockouts are utilized, due to the small capacity of the unit.

Shroud
A sheet metal shroud is available to cover the unit housing when the unit is not mounted in a drop ceiling. Painted Sky White with hammertone finish.

Two Position Spring Return Control Valves
For control of chilled water or hot water flow, a three-way, three-port diverting type valve or a two-way, two-port control valve is supplied loose for on site installation. Actuation is via a 24V signal from the unit’s electrical panel.

On a four pipe system where two-way valves are specified, the chilled water valve will be a normally closed type. The hot water valve will be a normally open type. Where three-way valves are specified, the same type valve will be supplied for both coils and should be installed normally closed to the coil in the case of the chilled water coil and normally open to the coil in the case of the hot water coil.

On a two pipe changeover system where a two-way valve is specified, a normally closed valve is supplied. Where a three-way valve is specified, this should be installed normally closed to the coil. In both cases, a pipe mounted changeover thermostat is recommended to monitor water supply temperature and allow action of the valve accordingly.

Valve Packages: Two Position Spring Return Control Valve with Two Shut-Off Valves
For control of chilled water or hot water flow, a three-way, three-port diverting type valve piped with two shut-off valves and a bypass leg, or a two-way, two-port control valve piped with a shut-off valve and a second separate shut-off valve is supplied loose for on site installation. Actuation is via a 24V signal from the unit’s electrical panel.

On a four pipe system where two-way valves are specified, the chilled water valve will be a normally closed type. The hot water valve will be a normally open type. Where three-way valves are specified, the same type valve will be supplied for both coils and should be installed normally closed to the coil in the case of the chilled water coil and normally open to the coil in the case of the hot water coil.

On a two pipe changeover system where a two-way valve is specified, a normally closed valve is supplied. Where a three-way valve is specified, this should be installed normally closed to the coil. In both cases, a pipe mounted changeover thermostat is recommended to monitor water supply temperature and allow action of the valve accordingly.

Low Ambient Kit
Fan speed control for compressor operation down to 0°F outside temperature.
### Table 6.1 – Cooling Performance – DX Cooling Only and Heat Pump Units

<table>
<thead>
<tr>
<th>Model</th>
<th>Entering Air 50% RH</th>
<th>85% RH</th>
<th>95% RH</th>
<th>99% RH</th>
<th>99.7% RH</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSD/SSH 18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>16500</td>
<td>14400</td>
<td>16300</td>
<td>13900</td>
<td>15800</td>
</tr>
<tr>
<td>75</td>
<td>17500</td>
<td>14900</td>
<td>17200</td>
<td>14400</td>
<td>16800</td>
</tr>
<tr>
<td>80</td>
<td>19200</td>
<td>15600</td>
<td>18900</td>
<td>15100</td>
<td>18500</td>
</tr>
<tr>
<td>SSD/SSH 24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>20000</td>
<td>18600</td>
<td>19600</td>
<td>16100</td>
<td>19300</td>
</tr>
<tr>
<td>75</td>
<td>21000</td>
<td>17300</td>
<td>20600</td>
<td>16500</td>
<td>20400</td>
</tr>
<tr>
<td>80</td>
<td>23000</td>
<td>18000</td>
<td>22600</td>
<td>17200</td>
<td>22200</td>
</tr>
<tr>
<td>SSD/SSH 30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>27600</td>
<td>25000</td>
<td>27000</td>
<td>23600</td>
<td>26400</td>
</tr>
<tr>
<td>75</td>
<td>29000</td>
<td>25800</td>
<td>27600</td>
<td>25000</td>
<td>27800</td>
</tr>
<tr>
<td>80</td>
<td>31400</td>
<td>27000</td>
<td>31000</td>
<td>25400</td>
<td>30200</td>
</tr>
<tr>
<td>SSD/SSH 36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>33400</td>
<td>28400</td>
<td>33000</td>
<td>27600</td>
<td>32200</td>
</tr>
<tr>
<td>75</td>
<td>35000</td>
<td>29200</td>
<td>34600</td>
<td>28200</td>
<td>34000</td>
</tr>
<tr>
<td>80</td>
<td>38200</td>
<td>32000</td>
<td>37800</td>
<td>29400</td>
<td>37000</td>
</tr>
<tr>
<td>SSD/SSH 42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>37800</td>
<td>31600</td>
<td>37200</td>
<td>30200</td>
<td>36800</td>
</tr>
<tr>
<td>75</td>
<td>39500</td>
<td>32400</td>
<td>39000</td>
<td>31000</td>
<td>38500</td>
</tr>
<tr>
<td>80</td>
<td>42500</td>
<td>33400</td>
<td>42000</td>
<td>32000</td>
<td>41500</td>
</tr>
</tbody>
</table>

### Table 6.2 – Heating Performance – Heat Pump Units

<table>
<thead>
<tr>
<th>Model</th>
<th>Entering Air 50% RH</th>
<th>60% RH</th>
<th>70% RH</th>
<th>80% RH</th>
<th>90% RH</th>
<th>95% RH</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSH 18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>19100</td>
<td>18900</td>
<td>18600</td>
<td>18600</td>
<td>17200</td>
<td>16000</td>
</tr>
<tr>
<td>60</td>
<td>17800</td>
<td>17600</td>
<td>17600</td>
<td>17600</td>
<td>16200</td>
<td>16000</td>
</tr>
<tr>
<td>70</td>
<td>16400</td>
<td>16200</td>
<td>16200</td>
<td>16200</td>
<td>16200</td>
<td>16200</td>
</tr>
<tr>
<td>SSH 24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>24400</td>
<td>24000</td>
<td>24000</td>
<td>23800</td>
<td>22800</td>
<td>21100</td>
</tr>
<tr>
<td>60</td>
<td>22800</td>
<td>22600</td>
<td>22600</td>
<td>22600</td>
<td>22600</td>
<td>20800</td>
</tr>
<tr>
<td>70</td>
<td>21400</td>
<td>21000</td>
<td>21000</td>
<td>21000</td>
<td>21000</td>
<td>21000</td>
</tr>
<tr>
<td>SSH 30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>30400</td>
<td>30200</td>
<td>30200</td>
<td>29800</td>
<td>28800</td>
<td>26800</td>
</tr>
<tr>
<td>60</td>
<td>29000</td>
<td>28800</td>
<td>28800</td>
<td>28800</td>
<td>28800</td>
<td>28800</td>
</tr>
<tr>
<td>70</td>
<td>27400</td>
<td>27200</td>
<td>27200</td>
<td>27200</td>
<td>27200</td>
<td>27200</td>
</tr>
<tr>
<td>SSH 36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>35800</td>
<td>35600</td>
<td>35600</td>
<td>35000</td>
<td>33800</td>
<td>33400</td>
</tr>
<tr>
<td>60</td>
<td>34200</td>
<td>33800</td>
<td>33800</td>
<td>33400</td>
<td>33400</td>
<td>33400</td>
</tr>
<tr>
<td>70</td>
<td>32400</td>
<td>32000</td>
<td>32000</td>
<td>31600</td>
<td>31600</td>
<td>31600</td>
</tr>
<tr>
<td>SSH 42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>39500</td>
<td>39000</td>
<td>39000</td>
<td>39000</td>
<td>39000</td>
<td>39000</td>
</tr>
<tr>
<td>60</td>
<td>38200</td>
<td>37800</td>
<td>37800</td>
<td>37800</td>
<td>37800</td>
<td>37800</td>
</tr>
<tr>
<td>70</td>
<td>37200</td>
<td>36800</td>
<td>36800</td>
<td>36600</td>
<td>36600</td>
<td>36600</td>
</tr>
</tbody>
</table>

**Notes:**
1. TC = Total Cooling Capacity
2. SC = Sensible Cooling Capacity
3. Cooling capacities are based on 95/75ºF DB/WB Outdoor ambient.
4. Heating capacities are based on 47/43ºF DB/WB Outdoor ambient.
Table 7.1 – Performance – DX Cooling Only Units

<table>
<thead>
<tr>
<th>Model</th>
<th>Cooling BTU/h</th>
<th>SEER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSD 18</td>
<td>21500</td>
<td>13</td>
</tr>
<tr>
<td>SSD 24</td>
<td>25400</td>
<td>13</td>
</tr>
<tr>
<td>SSD 30</td>
<td>34800</td>
<td>13</td>
</tr>
<tr>
<td>SSD 36</td>
<td>41800</td>
<td>13</td>
</tr>
<tr>
<td>SSD 42</td>
<td>45500</td>
<td>13</td>
</tr>
</tbody>
</table>

Table 7.2 – Performance – Heat Pump Units

<table>
<thead>
<tr>
<th>Model</th>
<th>Cooling BTU/h</th>
<th>Heating BTU/h</th>
<th>SEER</th>
<th>HSPF</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSH 18</td>
<td>21500</td>
<td>16400</td>
<td>13</td>
<td>7.7</td>
</tr>
<tr>
<td>SSH 24</td>
<td>25400</td>
<td>21400</td>
<td>13</td>
<td>7.7</td>
</tr>
<tr>
<td>SSH 30</td>
<td>34800</td>
<td>27400</td>
<td>13</td>
<td>7.7</td>
</tr>
<tr>
<td>SSH 36</td>
<td>41800</td>
<td>32400</td>
<td>13</td>
<td>7.7</td>
</tr>
<tr>
<td>SSH 42</td>
<td>45500</td>
<td>37000</td>
<td>13</td>
<td>7.7</td>
</tr>
</tbody>
</table>

Notes:
- Test conditions based on ARI 210/240.
- Cooling capacities are based on 80/67°F DB/WB Indoor and 82/65°F DB/WB Outdoor ambient.
- Heating capacities are based on 70/60°F DB/WB Indoor and 47/43°F DB/WB Outdoor ambient.
- All duties based on high fan speed except where stated otherwise.

Table 7.3 – Cooling Performance – Chilled Water Units

<table>
<thead>
<tr>
<th>Model</th>
<th>Entering Air DB °F @ 50% RH</th>
<th>Chilled Water Inlet/Outlet °F</th>
<th>40/50°F</th>
<th>45/55°F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TC BTU/h</td>
<td>SC BTU/h</td>
<td>Flow gpm</td>
<td>Pr Drop PSI</td>
</tr>
<tr>
<td>SCW2/8</td>
<td>72</td>
<td>5,236</td>
<td>5,156</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>6,528</td>
<td>5,989</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>10,037</td>
<td>7,529</td>
<td>2.0</td>
</tr>
<tr>
<td>SCW2/12</td>
<td>72</td>
<td>8,723</td>
<td>7,261</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>10,831</td>
<td>8,173</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>14,435</td>
<td>9,644</td>
<td>2.9</td>
</tr>
<tr>
<td>SCW 18</td>
<td>72</td>
<td>13,728</td>
<td>12,126</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>17,478</td>
<td>13,840</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>24,588</td>
<td>16,659</td>
<td>4.9</td>
</tr>
<tr>
<td>SCW 20</td>
<td>72</td>
<td>14,810</td>
<td>13,098</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>18,956</td>
<td>14,985</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>26,569</td>
<td>18,022</td>
<td>5.3</td>
</tr>
<tr>
<td>SCW 33</td>
<td>72</td>
<td>23,570</td>
<td>20,321</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>29,100</td>
<td>22,928</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>41,598</td>
<td>28,029</td>
<td>8.3</td>
</tr>
<tr>
<td>SCW 36</td>
<td>72</td>
<td>27,054</td>
<td>23,385</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>33,895</td>
<td>26,690</td>
<td>6.8</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>47,991</td>
<td>32,334</td>
<td>9.6</td>
</tr>
</tbody>
</table>

1. TC = Total Cooling Capacity
2. SC = Sensible Cooling Capacity
3. All duties based on high fan speed.
4. Pressure drops are coil only, excluding valves.
### Table 8.1 – Heating Performance – Chilled Water Units with Optional Hot Water Coil

<table>
<thead>
<tr>
<th>Model</th>
<th>Entering Air DB °F @ 50% RH</th>
<th>Heating Capacity BTU/h</th>
<th>Flowrate GPM</th>
<th>Pressure Drop PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCW2/8</td>
<td>50</td>
<td>16,819</td>
<td>1.8</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>15,292</td>
<td>1.6</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>13,799</td>
<td>1.4</td>
<td>2.7</td>
</tr>
<tr>
<td>SCW2/12</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SCW 18</td>
<td>50</td>
<td>35,763</td>
<td>3.7</td>
<td>3.4</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>32,480</td>
<td>3.4</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>29,258</td>
<td>3.1</td>
<td>2.4</td>
</tr>
<tr>
<td>SCW 20</td>
<td>50</td>
<td>37,938</td>
<td>4.0</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>34,401</td>
<td>3.6</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>30,946</td>
<td>3.2</td>
<td>2.7</td>
</tr>
<tr>
<td>SCW 33</td>
<td>50</td>
<td>55,683</td>
<td>5.8</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>51,120</td>
<td>5.3</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>46,555</td>
<td>4.9</td>
<td>3.0</td>
</tr>
<tr>
<td>SCW 36</td>
<td>50</td>
<td>62,005</td>
<td>6.5</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>56,762</td>
<td>5.9</td>
<td>4.1</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>51,600</td>
<td>5.4</td>
<td>3.5</td>
</tr>
</tbody>
</table>

### Table 8.2 – Heating Performance DX Cooling Only and Heat Pump Units with Optional Hot Water Coil

<table>
<thead>
<tr>
<th>Model</th>
<th>Entering Air DB °F @ 50% RH</th>
<th>Heating Capacity BTU/h</th>
<th>Flowrate GPM</th>
<th>Pressure Drop PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSD/SSH 18</td>
<td>50</td>
<td>46,389</td>
<td>4.8</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>42,598</td>
<td>4.4</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>38,746</td>
<td>4.0</td>
<td>0.9</td>
</tr>
<tr>
<td>SSD/SSH 24</td>
<td>50</td>
<td>50,279</td>
<td>5.3</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>46,153</td>
<td>4.8</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>41,993</td>
<td>4.4</td>
<td>1.0</td>
</tr>
<tr>
<td>SSD/SSH 30</td>
<td>50</td>
<td>67,912</td>
<td>7.1</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>62,277</td>
<td>6.5</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>56,609</td>
<td>5.9</td>
<td>2.3</td>
</tr>
<tr>
<td>SSD/SSH 36</td>
<td>50</td>
<td>71,636</td>
<td>7.5</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>65,640</td>
<td>6.9</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>59,600</td>
<td>6.2</td>
<td>2.6</td>
</tr>
<tr>
<td>SSD/SSH 42</td>
<td>50</td>
<td>77,386</td>
<td>8.1</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>70,803</td>
<td>7.4</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>64,268</td>
<td>6.7</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Notes:
1. All duties based on high fan speed.
2. Pressure drops are coil only, excluding valves.
### Table 9.1 – Heating Performance – Chilled Water Units – Two Pipe Changeover

<table>
<thead>
<tr>
<th>Model</th>
<th>Entering Air</th>
<th>Hot Water 180°F Inlet / 160°F Outlet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DB °F @ 50% RH</td>
<td>Heating Capacity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BTU/h</td>
</tr>
<tr>
<td>SCW2/8</td>
<td>50</td>
<td>28,389</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>25,903</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>23,605</td>
</tr>
<tr>
<td>SCW2/12</td>
<td>50</td>
<td>33,471</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>30,715</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>27,995</td>
</tr>
<tr>
<td>SCW 18</td>
<td>50</td>
<td>60,388</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>55,127</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>49,706</td>
</tr>
<tr>
<td>SCW 20</td>
<td>50</td>
<td>65,350</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>59,887</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>54,118</td>
</tr>
<tr>
<td>SCW 33</td>
<td>50</td>
<td>99,476</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>91,494</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>82,986</td>
</tr>
<tr>
<td>SCW 36</td>
<td>50</td>
<td>114,225</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>105,132</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>95,896</td>
</tr>
</tbody>
</table>

**Notes:**
3. All duties based on high fan speed.
4. Pressure drops are coil only, excluding valves.
Figure 10.1 – Dimensions – Small Chassis
Model SCW2/8 and SCW2/12

1. CW Inlet
2. CW Outlet
3. HW Coil Inlet (Optional)
4. HW Coil Outlet (Optional)
5. Branch Duct Opening (x3)
6. Fresh Air Intake (x2)
7. Pump Inspection Port
8. Condensate Drain
9. Control Panel
10. Mounting Bracket
Figure 11.1 – Dimensions – Medium Chassis
Model SCW 18 and SCW 20

1. CW Coil Inlet
2. CW Coil Outlet
3. HW Coil Inlet (Optional)
4. HW Coil Outlet (Optional)
5. Fresh Air Intake (x3)
6. Branch Duct Opening (x4)
7. Pump Inspection Port
8. Condensate Drain
9. Control Panel
10. Mounting Bracket
Figure 12.1 – Dimensions – Large Chassis

Model SCW 33 and SCW 36

1. CW Coil Inlet
2. CW Coil Outlet
3. HW Coil Inlet (Optional)
4. HW Coil Outlet (Optional)
5. Fresh Air Intake (x3)
6. Branch Duct Opening (x4)
7. Pump Inspection Port
8. Condensate Drain
9. Control Panel
10. Mounting Bracket
Figure 13.1 – Dimensions – Medium Chassis
Model SSD/SSH 18 and SSD/SSH 24

1. DX Suction Line
2. DX Liquid Line
3. HW Coil Inlet (Optional)
4. HW Coil Outlet (Optional)
5. Fresh Air Intake (x3)
6. Branch Duct Opening (x4)
7. Pump Inspection Port
8. Condensate Drain
9. Control Panel
10. Mounting Bracket
Figure 14.1 – Dimensions – Large Chassis
Model SSD/SSH 30, SSD/SSH 36 and SSD/SSH 42

1. DX Suction Line
2. DX Liquid Line
3. HW Coil Inlet (Optional)
4. HW Coil Outlet (Optional)
5. Fresh Air Intake (x3)
6. Branch Duct Opening (x4)
7. Pump Inspection Port
8. Condensate Drain
9. Control Panel
10. Mounting Bracket
### Table 15.1 – Technical Data – DX Cooling Only and Heat Pump Units

<table>
<thead>
<tr>
<th>Units</th>
<th>SSD/SSH 18</th>
<th>SSD/SSH 24</th>
<th>SSD/SSH 30</th>
<th>SSD/SSH 36</th>
<th>SSD/SSH 42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Cooling Capacity (1) BTU/h</td>
<td>19200</td>
<td>23000</td>
<td>31400</td>
<td>38200</td>
<td>42500</td>
</tr>
<tr>
<td>Nominal Heating Capacity (2) BTU/h</td>
<td>16400</td>
<td>21400</td>
<td>27400</td>
<td>32400</td>
<td>37200</td>
</tr>
<tr>
<td>Nominal System SEER (3)</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>HSPF</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
</tr>
</tbody>
</table>

#### Construction
- **Material: Fascia** - High Impact Polystyrene
- **Material: Chassis** - Galvanized Steel
- **Color: Fascia** - Pearl Grey
- **Fire rating** - UL94 VO

#### Evaporator
- **Type** - Finned Tube
- **Quantity**
  - 1
  - 1
  - 1
  - 1
  - 1
- **Face Area** **Ft²**
  - 4.0
  - 4.0
  - 5.2
  - 5.2
  - 5.2
- **Nominal Airflow** **cfm**
  - High
  - Med
  - Low
  - 590
  - 590
  - 540
  - 670
  - 800
  - 920
  - 1000
  - 1130
- **Discharge**
  - 4-way
  - 4-way
  - 4-way
  - 4-way
  - 4-way

#### Fan
- **Type** - Centrifugal
- **Quantity**
  - 1
  - 1
  - 2
  - 2
  - 2
- **Diameter** **in**
  - 14
  - 14
  - 14
  - 14
  - 14
- **Horsepower (per fan)** **HP**
  - 1/8
  - 1/8
  - 1/8
  - 1/8
  - 1/8

#### Refrigeration
- **Number of Circuits**
  - 1
  - 1
  - 1
  - 1
  - 1
- **Refrigerant Type**
  - R-410A
  - R-410A
  - R-410A
  - R-410A
  - R-410A

#### Weights
- **Weight - Chassis** **lb**
  - 66
  - 66
  - 97
  - 97
  - 97
- **Weight - Fascia** **lb**
  - 18
  - 18
  - 21
  - 21
  - 21

#### Connections (4)
- **Suction** **in**
  - 3/4
  - 3/4
  - 3/4
  - 3/4
  - 3/4
- **Liquid** **in**
  - 3/8
  - 3/8
  - 3/8
  - 3/8
  - 3/8
- **Condensate (ID)** **in**
  - 3/8
  - 3/8
  - 3/8
  - 3/8
  - 3/8

#### Filtration
- **Type** - Wire Framed Periframe
- **Quantity**
  - 2
  - 2
  - 3
  - 3
  - 3
- **Arrestance**
  - 80%
  - 80%
  - 80%
  - 80%
  - 80%

#### Condensate Pump
- **Maximum Head** **gpm**
  - 30
  - 30
  - 30
  - 30
  - 30
- **Nominal Flowrate** **gpm**
  - 0.1
  - 0.1
  - 0.1
  - 0.1
  - 0.1

#### Options
- **Electric Heating Capacity** **kW**
  - 3.0
  - 3.0
  - 5.0
  - 5.0
  - 5.0
- **HW Heating Capacity (5) BTU/h**
  - 38,746
  - 41,993
  - 56,609
  - 59,600
  - 64,268
- **HW Coil Connection (OD)** **in**
  - 7/8
  - 7/8
  - 7/8
  - 7/8
  - 7/8
- **Max Branch Duct Connections (qty)**
  - 2
  - 2
  - 2
  - 2
  - 2
- **Branch Duct Diameter** **in**
  - 5
  - 5
  - 6
  - 6
  - 6
- **Branch Duct Air Volume (6) cfm**
  - 115
  - 130
  - 180
  - 200
  - 220
- **Fresh Air Connections (qty)**
  - 1-3
  - 1-3
  - 1-3
  - 1-3
  - 1-3
- **Fresh Air Diameter** **in**
  - 3
  - 3
  - 3
  - 3
  - 3
- **Fresh Air Volume (7) cfm**
  - 60
  - 65
  - 85
  - 90
  - 95

(1) Nominal cooling capacity based on 80/67°F DB/WB and 95/75°F DB/WB ambient.
(2) Nominal heating capacity based on 70/60°F DB/WB and 47/43°F DB/WB ambient.
(3) Test conditions based on ARI 210/240.
(4) Refrigerant line sizes should always match condensing unit connection sizes.
(5) Nominal heating capacity based on 70/60°F DB/WB and water temperature of 180°F inlet / 160°F outlet.
(6) Maximum air volume available through one branch duct 6’ long, with Cassette fan(s) at high speed and corresponding fascia aperture closed.
(7) Maximum fresh air through all knockouts connected to one 10’ long duct with fan at high speed.
### Table 16.1 – Technical Data – Chilled Water Units

<table>
<thead>
<tr>
<th></th>
<th>SCW2/8</th>
<th>SCW2/12</th>
<th>SCW 18</th>
<th>SCW 20</th>
<th>SCW 33</th>
<th>SCW 36</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal Cooling Capacity (1)</strong></td>
<td>BTU/h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6,601</td>
<td>11,091</td>
<td>17,592</td>
<td>19,087</td>
<td>29,722</td>
<td>35,258</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material: Fascia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Impact Polystyrene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material: Chassis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Galvanized Steel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color: Fascia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearl Grey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire rating</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UL94 VO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chilled Water Coil</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Face Area</td>
<td>Ft²</td>
<td>1.8</td>
<td>1.8</td>
<td>2.8</td>
<td>4.2</td>
<td>5.2</td>
</tr>
<tr>
<td>Nominal Airflow</td>
<td>cfm</td>
<td>350</td>
<td>350</td>
<td>630</td>
<td>700</td>
<td>970</td>
</tr>
<tr>
<td>Discharge</td>
<td>4-way</td>
<td>4-way</td>
<td>4-way</td>
<td>4-way</td>
<td>4-way</td>
<td>4-way</td>
</tr>
<tr>
<td>Unit water Volume</td>
<td>gal</td>
<td>0.29</td>
<td>0.29</td>
<td>0.45</td>
<td>0.45</td>
<td>0.79</td>
</tr>
<tr>
<td><strong>Fan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Diameter</td>
<td>in</td>
<td>12</td>
<td>12</td>
<td>15</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Horsepower (per fan)</td>
<td>HP</td>
<td>1/8</td>
<td>1/8</td>
<td>1/8</td>
<td>1/8</td>
<td>1/8</td>
</tr>
<tr>
<td><strong>Weights</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight - Chassis</td>
<td>lb</td>
<td>40</td>
<td>40</td>
<td>64</td>
<td>64</td>
<td>97</td>
</tr>
<tr>
<td>Weight - Fascia</td>
<td>lb</td>
<td>5</td>
<td>5</td>
<td>18</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td><strong>Connections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chilled Water Inlet</td>
<td>in</td>
<td>5/8</td>
<td>5/8</td>
<td>7/8</td>
<td>7/8</td>
<td>7/8</td>
</tr>
<tr>
<td>Chilled Water Outlet</td>
<td>in</td>
<td>5/8</td>
<td>5/8</td>
<td>7/8</td>
<td>7/8</td>
<td>7/8</td>
</tr>
<tr>
<td><strong>Filtration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Arrestance</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td><strong>Condensate Pump</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Head</td>
<td>in</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Nominal Flowrate</td>
<td>gpm</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Options</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electric Heating Capacity</td>
<td>kW</td>
<td>1.5</td>
<td>1.5</td>
<td>3.0</td>
<td>3.0</td>
<td>5.0</td>
</tr>
<tr>
<td>HW Heating Capacity (2)</td>
<td>BTU/h</td>
<td>13,799</td>
<td>N/A</td>
<td>29,258</td>
<td>30,946</td>
<td>46,455</td>
</tr>
<tr>
<td>HW Coil Connection (OD)</td>
<td>in</td>
<td>5/8</td>
<td>N/A</td>
<td>5/8</td>
<td>5/8</td>
<td>5/8</td>
</tr>
<tr>
<td>Max Branch Duct Connections</td>
<td>(qty)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Branch Duct Diameter</td>
<td>in</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Ducted Air Volume (3)</td>
<td>cfm</td>
<td>80</td>
<td>80</td>
<td>100</td>
<td>125</td>
<td>200</td>
</tr>
<tr>
<td>Fresh Air Connections</td>
<td>(qty)</td>
<td>1-2</td>
<td>1-2</td>
<td>1-3</td>
<td>1-3</td>
<td>1-3</td>
</tr>
<tr>
<td>Fresh Air Duct Diameter</td>
<td>in</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Fresh Air Volume (4)</td>
<td>cfm</td>
<td>40</td>
<td>40</td>
<td>60</td>
<td>65</td>
<td>90</td>
</tr>
</tbody>
</table>

(1) Nominal cooling capacity based on 80/67°F DB/WB and water temperature of 45°F inlet / 55°F outlet.
(2) Nominal heating capacity based on 70/60°F DB/WB and water temperature of 180°F inlet / 160°F outlet.
(3) Maximum air volume available through one branch duct 6’ long, with Cassette fan(s) at high speed and corresponding fascia aperture closed.
(4) Maximum fresh air through all knockouts connected to one 10’ long duct with fan at high speed.
**Table 17.1 – Technical Data – Condensers for DX Cooling Only Units**

<table>
<thead>
<tr>
<th>Cassette Unit</th>
<th>SSD 18</th>
<th>SSD 24</th>
<th>SSD 30</th>
<th>SSD 36</th>
<th>SSD 42</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal System Cooling Capacity</td>
<td>BTU/h</td>
<td>18,000</td>
<td>24,000</td>
<td>30,000</td>
<td>36,000</td>
</tr>
<tr>
<td>Nominal System SEER</td>
<td></td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material: Chassis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td></td>
<td>Pre-Treated Galvanized Painted Steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dimensions/Weights</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height (includes Fan Guard)</td>
<td>in</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Width</td>
<td>in</td>
<td>23½</td>
<td>23½</td>
<td>23½</td>
<td>29</td>
</tr>
<tr>
<td>Depth</td>
<td>in</td>
<td>23½</td>
<td>23½</td>
<td>23½</td>
<td>29</td>
</tr>
<tr>
<td>Weight</td>
<td>lb</td>
<td>97</td>
<td>129</td>
<td>131</td>
<td>145</td>
</tr>
<tr>
<td><strong>Compressor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td>Rotary</td>
<td>Recip</td>
<td>Recip</td>
<td>Recip</td>
</tr>
<tr>
<td>Crankcase Heater Fitted</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Condenser</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coil Construction</td>
<td></td>
<td>Plate Fin Microchannel</td>
<td>Plate Fin Microchannel</td>
<td>Plate Fin Microchannel</td>
<td>Plate Fin Microchannel</td>
</tr>
<tr>
<td><strong>Connections (1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Refrigerant Charge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condenser-factory charge</td>
<td>lbs-oz</td>
<td>3 - 3</td>
<td>3 - 13</td>
<td>3 - 14</td>
<td>4 - 9</td>
</tr>
<tr>
<td>Charge Per Foot of Pipework</td>
<td>oz</td>
<td>0.58</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
</tr>
</tbody>
</table>

(1) Refrigerant line sizes should always match condensing unit connection sizes.
### Table 18.1 – Technical Data – Condensers for Heat Pump Units

<table>
<thead>
<tr>
<th>Cassette Unit</th>
<th>SSH 18</th>
<th>SSH 24</th>
<th>SSH 30</th>
<th>SSH 36</th>
<th>SSH 42</th>
</tr>
</thead>
<tbody>
<tr>
<td>YHJD18</td>
<td>18,000</td>
<td>24,000</td>
<td>30,000</td>
<td>36,000</td>
<td>42,000</td>
</tr>
<tr>
<td>YHJD24</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>YHJD30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YHJD36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YHJD42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Performance
- **Nominal System Cooling Capacity**: BTU/h
- **Nominal System SEER**: 13

#### Construction
- **Material: Chassis**: Pre-Treated Galvanized Painted Steel
- **Color**: Champagne

#### Dimensions/Weights
- **Height (includes Fan Guard)**: in
- **Width**: in
- **Depth**: in
- **Weight**: lb

#### Compressor
- **Type**: Scroll, Recip, Recip, Recip, Scroll
- **Crankcase Heater Fitted**: No, Yes, Yes, Yes, No

#### Condenser
- **Coil Construction**: Round Tube Plate Fin, Round Tube Plate Fin, Round Tube Plate Fin, Round Tube Plate Fin, Round Tube Plate Fin

#### Connections (1)
- **Suction**: in
- **Liquid**: in

#### Refrigerant Charge
- **Condenser-factory charge**: lbs-oz
- **Charge Required-Per Foot of Pipework**: oz

(1) Refrigerant line sizes should always match condensing unit connection sizes.
### Table 19.1 – Electrical Data – Ceiling Cassettes

<table>
<thead>
<tr>
<th>Chassis Size</th>
<th>Units</th>
<th>Model Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Unit Data</td>
<td></td>
<td>2/8 &amp; 12</td>
</tr>
<tr>
<td>Power Supply</td>
<td>208-230V/1Ph/60Hz</td>
<td>208-230V/1Ph/60Hz</td>
</tr>
<tr>
<td>Full Load Amps</td>
<td>A</td>
<td>0.65</td>
</tr>
<tr>
<td>Minimum Circuit Amps (MCA)</td>
<td>A</td>
<td>0.74</td>
</tr>
<tr>
<td>Recommended Fuse</td>
<td>A</td>
<td>10</td>
</tr>
</tbody>
</table>

**With Optional Electric Heat (1)**

| Power Supply | 208-230V/1Ph/60Hz | 208-230V/1Ph/60Hz | 208-230V/1Ph/60Hz |
| Electric Heat Capacity | kW | 1.5 | 3.0 | 5.0 |
| Full Load Amps | A | 7.2 | 13.9 | 23.1 |
| Minimum Circuit Amps (MCA) | A | 8.9 | 19.3 | 28.8 |
| Recommended Fuse with Heat | A | 15 | 20 | 30 |

**With Optional Booster Xfmr (2)**

| Power Supply | 115V/1Ph/60Hz | 115V/1Ph/60Hz | 115V/1Ph/60Hz |
| Full Load Amps | A | 1.3 | 1.7 | 2.5 |
| Minimum Circuit Amps (MCA) | A | 1.5 | 2.0 | 2.8 |
| Recommended Fuse | A | 10 | 10 | 10 |

(1) Standard Unit fitted with optional electric heating elements. Available with 230V model units only.

(2) Standard unit fitted with optional booster transformer for connection to a 115V electrical supply. Electric heat not available in conjunction with this option.

### Table 19.2 – Electrical Data – Condensers for DX Cooling Only Units

<table>
<thead>
<tr>
<th>Cassette Unit</th>
<th>SSD 18</th>
<th>SSD 24</th>
<th>SSD 30</th>
<th>SSD 36</th>
<th>SSD 42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Supply</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCA</td>
<td>A</td>
<td>9.8</td>
<td>12.4</td>
<td>14.7</td>
<td>17.9</td>
</tr>
<tr>
<td>Maximum Overcurrent Device Amps (1)</td>
<td>A</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Minimum Overcurrent Device Amps (2)</td>
<td>A</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>20</td>
</tr>
</tbody>
</table>

| Compressor    | | | | | |
| Rated Load Amps (RLA) | A | 7.4 | 9.3 | 10.6 | 13.1 | 16.0 |
| Locked Rotor Amps (LRA) | A | 40 | 43 | 54 | 74 | 84 |

| Condenser Fan | | | | | |
| Rated Load Amps (RLA) | A | 0.5 | 0.8 | 1.4 | 1.5 | 1.5 |
| Rated Horsepower | hp | 1/12 | 1/8 | 1/4 | 1/4 | 4/4 |

(1) Dual element fuses or HACR circuit breaker. Maximum allowable overcurrent protection.

(2) Dual element fuses or HACR circuit breaker. Minimum recommended overcurrent protection.
Table 20.1 – Electrical Data – Condensers for Heat Pump Units

<table>
<thead>
<tr>
<th>Cassette Unit</th>
<th>YHJD18</th>
<th>YHJD24</th>
<th>YHJD30</th>
<th>YHJD36</th>
<th>YHJD42</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSH 18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSH 24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSH 30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSH 36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSH 42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Standard Data

<table>
<thead>
<tr>
<th></th>
<th>YHJD18</th>
<th>YHJD24</th>
<th>YHJD30</th>
<th>YHJD36</th>
<th>YHJD42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>208-230V/1Ph/60Hz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCA</td>
<td>A 11.9</td>
<td>11.2</td>
<td>14.1</td>
<td>19.7</td>
<td>28.6</td>
</tr>
<tr>
<td>Maximum Overcurrent Amps (1)</td>
<td>A 20</td>
<td>15</td>
<td>20</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Minimum Overcurrent Amps (2)</td>
<td>A 15</td>
<td>15</td>
<td>15</td>
<td>20</td>
<td>30</td>
</tr>
</tbody>
</table>

### Compressor

<table>
<thead>
<tr>
<th></th>
<th>YHJD18</th>
<th>YHJD24</th>
<th>YHJD30</th>
<th>YHJD36</th>
<th>YHJD42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Load Amps (RLA)</td>
<td>A 9.0</td>
<td>8.3</td>
<td>10.6</td>
<td>14.7</td>
<td>21.8</td>
</tr>
<tr>
<td>Locked Rotor Amps (LRA)</td>
<td>A 48</td>
<td>43</td>
<td>54</td>
<td>74</td>
<td>105</td>
</tr>
</tbody>
</table>

### Condenser Fan

<table>
<thead>
<tr>
<th></th>
<th>YHJD18</th>
<th>YHJD24</th>
<th>YHJD30</th>
<th>YHJD36</th>
<th>YHJD42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Load Amps (RLA)</td>
<td>A 0.7</td>
<td>0.8</td>
<td>0.8</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Rated Horsepower hp</td>
<td>1/10</td>
<td>1/8</td>
<td>1/8</td>
<td>1/4</td>
<td>1/4</td>
</tr>
</tbody>
</table>

(1) Dual element fuses or HACR circuit breaker. Maximum allowable overcurrent protection.
(2) Dual element fuses or HACR circuit breaker. Minimum recommended overcurrent protection.

Table 20.2 – Sound Data – Ceiling Cassette Units

<table>
<thead>
<tr>
<th>Models</th>
<th>Fan Speed</th>
<th>SPL, dB (1)</th>
<th>125 Hz</th>
<th>250 Hz</th>
<th>500 Hz</th>
<th>1000 Hz</th>
<th>2000 Hz</th>
<th>4000 Hz</th>
<th>8000 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCW2/8</td>
<td>High</td>
<td>29</td>
<td>37</td>
<td>37</td>
<td>33</td>
<td>29</td>
<td>21</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Med</td>
<td>26</td>
<td>34</td>
<td>34</td>
<td>30</td>
<td>24</td>
<td>15</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>22</td>
<td>31</td>
<td>29</td>
<td>25</td>
<td>17</td>
<td>8</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>SCW2/12</td>
<td>High</td>
<td>35</td>
<td>42</td>
<td>41</td>
<td>38</td>
<td>35</td>
<td>28</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Med</td>
<td>32</td>
<td>38</td>
<td>39</td>
<td>36</td>
<td>32</td>
<td>24</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>29</td>
<td>37</td>
<td>37</td>
<td>33</td>
<td>29</td>
<td>21</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>SSD/SSH 18</td>
<td>High</td>
<td>43</td>
<td>41</td>
<td>45</td>
<td>38</td>
<td>40</td>
<td>33</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Med</td>
<td>39</td>
<td>39</td>
<td>41</td>
<td>35</td>
<td>36</td>
<td>27</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>38</td>
<td>38</td>
<td>40</td>
<td>34</td>
<td>34</td>
<td>25</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>SSD/SSH 24</td>
<td>High</td>
<td>46</td>
<td>43</td>
<td>47</td>
<td>40</td>
<td>43</td>
<td>37</td>
<td>29</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Med</td>
<td>43</td>
<td>41</td>
<td>45</td>
<td>38</td>
<td>40</td>
<td>33</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>39</td>
<td>39</td>
<td>41</td>
<td>35</td>
<td>36</td>
<td>27</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>SSD/SSH 30</td>
<td>High</td>
<td>48</td>
<td>51</td>
<td>49</td>
<td>46</td>
<td>42</td>
<td>34</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Med</td>
<td>44</td>
<td>50</td>
<td>46</td>
<td>43</td>
<td>38</td>
<td>28</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>42</td>
<td>49</td>
<td>44</td>
<td>41</td>
<td>36</td>
<td>25</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>SSD/SSH 36</td>
<td>High</td>
<td>52</td>
<td>54</td>
<td>54</td>
<td>50</td>
<td>46</td>
<td>41</td>
<td>27</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Med</td>
<td>48</td>
<td>51</td>
<td>49</td>
<td>46</td>
<td>42</td>
<td>34</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>45</td>
<td>50</td>
<td>47</td>
<td>44</td>
<td>39</td>
<td>31</td>
<td>19</td>
<td>18</td>
</tr>
</tbody>
</table>

(1) SPL is the overall Sound Pressure Level measured at a distance of 5 ft below the fascia in free field, dry coil conditions, referenced to 2 x 10^-5 Pa
Table 21.1 – Sound Data – Condensers for DX Cooling Only and Heat Pump Units

<table>
<thead>
<tr>
<th>Model</th>
<th>Units</th>
<th>Cooling</th>
<th>Heating</th>
</tr>
</thead>
<tbody>
<tr>
<td>YCJD18</td>
<td>dBA</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>YCJD24</td>
<td>dBA</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>YCJD30</td>
<td>dBA</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>YCJD36</td>
<td>dBA</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>YCJD42</td>
<td>dBA</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>YHJD18</td>
<td>dBA</td>
<td>70.1</td>
<td>70.9</td>
</tr>
<tr>
<td>YHJD24</td>
<td>dBA</td>
<td>75.8</td>
<td>75.0</td>
</tr>
<tr>
<td>YHJD30</td>
<td>dBA</td>
<td>74.7</td>
<td>74.8</td>
</tr>
<tr>
<td>YHJD36</td>
<td>dBA</td>
<td>76.5</td>
<td>76.5</td>
</tr>
<tr>
<td>YHJD42</td>
<td>dBA</td>
<td>72.0</td>
<td>76.0</td>
</tr>
</tbody>
</table>

Rated in accordance with ARI 270-95 standards
Features

Air Conditioning System Condensing Units

Up Flow Condenser, Model: YCJD18S41S1H through YCJD42S41S1H

Standard Features
- **Quality Condenser Coils** – The coil is constructed of aluminum microchannel tubing and enhanced aluminum fins for increased efficiency and corrosion protection.
- **Protected Compressor** – The compressor is internally protected against high pressure, temperature, and externally by a factory installed high pressure switch. This is accomplished by simultaneous operation of high pressure relief valve and a temperature sensor which protects the compressor if undesirable operating conditions occur. A liquid line filter-drier further protects the compressor.
- **Hard Start Kit** – Provides increased starting torque for areas with low voltage.
- **Durable Finish** – The cabinet is made of pre-painted steel. The pre-treated galvanized steel provides a better paint to steel bond, which resists corrosion and rust creep. Special primer formulas and matted-textured finish ensure less fading when exposed to sunlight.
- **Lower Installed Cost** – Installation time and costs are reduced by easy power and control wiring connections. Available in sweat connect models only. The unit contains enough refrigerant for matching indoor coils and 15 feet of interconnecting piping. The small base dimension means less space is required on the ground or roof.
- **Top Discharge** – The warm air from the top mounted fan is blown up and away from the structure and any landscaping. This allows compact location on multi-unit applications.
- **Low Operating Sound Level** – The upward air flow carries the normal operating noise away from the living area. The rigid top panel effectively isolates any motor sound. Isolator mounted compressor and rippled fins of the condenser coil muffle the normal fan motor and compressor operating sounds.
- **Low Maintenance** – Long life permanently lubricated motor-bearings need no annual servicing.
- **Easy Service Access** – Fully exposed refrigerant connections and a single panel covering the electrical controls makes for easy servicing of the unit.
- **Secured Service Valves** – Secured re-usable service valves are provided on both the liquid and vapor sweat connections for ease of evacuating and charging.
- **U.L. and C.U.L. Listed** – Approved for outdoor application.

Field Installed Accessories
- **Low Ambient Kit – Fan Cycle Kit** for operation down to 0°F outside temperature. Certified in accordance with the Unitary Small Equipment certification program, which is based on ARI Standard 210/240.

Figure 22.1 – Dimensions – DX Cooling Condensing Unit

<table>
<thead>
<tr>
<th></th>
<th>YCJD18</th>
<th>YCJD24</th>
<th>YCJD30</th>
<th>YCJD36</th>
<th>YCJD42</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = Height</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>B = Depth</td>
<td>23½</td>
<td>23½</td>
<td>23½</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>C = Width</td>
<td>23½</td>
<td>23½</td>
<td>23½</td>
<td>29</td>
<td>29</td>
</tr>
</tbody>
</table>
Features

Heat Pump System Condenser Units

**Up Flow Condenser, Model: YHJD18S41S1 through YHJD42S41S1**

**Standard Features**
- **Quality Condenser Coils** – The coil is constructed of copper tubing and enhanced aluminum fins for increased efficiency and corrosion protection.
- **Protected Compressor** – The compressor is internally protected against high pressure, temperature, and externally by a factory installed high pressure switch. This is accomplished by simultaneous operation of high pressure relief valve and a temperature sensor which protects the compressor if undesirable operating conditions occur. A liquid line filter-drier further protects the compressor.
- **Hard Start Kit** – (On model sizes 24, 30 and 36) Provides increased starting torque for areas with low voltage.
- **Durable Finish** – The cabinet is made of pre-painted steel. The pre-treated galvanized steel provides a better paint to steel bond, which resists corrosion and rust creep. Special primer formulas and matted-textured finish ensure less fading when exposed to sunlight.
- **Lower Installed Cost** – Installation time and costs are reduced by easy power and control wiring connections. Available in sweat connect models only. The unit contains enough refrigerant for matching indoor coils and 15 feet of interconnecting piping. The small base dimension means less space is required on the ground or roof.
- **Top Discharge** – The warm air from the top mounted fan is blown up and away from the structure and any landscaping. This allows compact location on multi-unit applications.
- **Low Operating Sound Level** – The upward air flow carries the normal operating noise away from the living area. The rigid top panel effectively isolates any motor sound. Isolator mounted compressor and rippled fins of the condenser coil muffle the normal fan motor and compressor operating sounds.
- **Low Maintenance** – Long life permanently lubricated motor-bearings need no annual servicing.
- **Easy Service Access** – Fully exposed refrigerant connections and a single panel covering the electrical controls makes for easy servicing of the unit.
- **Secured Service Valves** – Secured re-usable service valves are provided on both the liquid and vapor sweat connections for ease of evacuating and charging.
- **U.L. and C.U.L. Listed** – Approved for outdoor application.

Certified in accordance with the Unitary Small Equipment certification program, which is based on ARI Standard 210/240.

**Figure 23.1 – Dimensions – Heat Pump Condensing Unit**

<table>
<thead>
<tr>
<th></th>
<th>YHJD18</th>
<th>YHJD24</th>
<th>YHJD30</th>
<th>YHJD36</th>
<th>YHJD42</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = Height</td>
<td>28</td>
<td>32</td>
<td>36</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>B = Depth</td>
<td>34</td>
<td>34</td>
<td>34</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>C = Width</td>
<td>34</td>
<td>34</td>
<td>34</td>
<td>34</td>
<td>34</td>
</tr>
</tbody>
</table>
The Modine brand has been the industry standard since Arthur B. Modine invented and patented the first lightweight, suspended hydronic unit heater in 1923. No other manufacturer can provide the combined application flexibility, technical expertise and fast delivery found at Modine. Consult your local Modine distributor for help in solving your indoor air problems.

The Modine brand has been the industry standard since Arthur B. Modine invented and patented the first lightweight, suspended hydronic unit heater in 1923. No other manufacturer can provide the combined application flexibility, technical expertise and fast delivery found at Modine. Consult your local Modine distributor for help in solving your indoor air problems.

**INDOOR AIR SOLUTIONS**

Products from Modine are designed to provide indoor air-comfort solutions for commercial, institutional and industrial applications. Whatever your heating, ventilating and cooling requirements, Modine has the product to satisfy your needs, including:

- Gas-fired unit heaters
- Gas-fired duct furnaces
- Gas-fired high-intensity infrared heaters
- Gas-fired low-intensity infrared heaters
- Steam/hot water unit heaters
- Steam/hot water cabinet unit heaters
- Steam/hot water commercial fin tube radiation
- Ceiling cassettes, DX and chilled water
- Oil-fired unit heaters
- Electric unit heaters
- Indoor gravity vented single and multiple duct furnace make-up air units
- Indoor separated combustion single and multiple duct furnace make-up air units
- Outdoor single and multiple duct furnace make-up air units
- Direct-fired make-up air units

With burner capacities up to 7,862,000 Btu/hr and air-handling capacities as high as 60,000 CFM, Modine products are compatible with every fuel type, including:

- **Natural or Propane Gas**
- **Steam/Hot Water**
- **Oil**
- **Electric**

Specific catalogs and computer-generated heat-loss calculations are available for each product. Catalogs 75-136 and 75-137 provide details on all Modine HVAC equipment.