30RB060-390
AIR-COOLED LIQUID CHILLERS
WITH COMFORTLINK™ CONTROLS
60 Hz

— PERFORMANCE DATA
— CERTIFIED DIMENSIONAL PRINTS
— FIELD WIRING DIAGRAM
DESCRIPTION

All 30RB060-390 units are packaged air-cooled liquid chillers that are factory wired, refrigerant piped, and charged with R-410a refrigerant. Any 30RB units with the remote cooler option require field-installed piping, controls, and must be field charged with additional refrigerant. Weatherproof construction and compact design makes 30RB units ideal for rooftop or ground level installation. Upward discharge airflow minimizes directional sound and dissipates heat away from surrounding areas.

FEATURES

Compression
- Hermetic scroll compressors are maintenance free and protected by an auto-adaptive control that minimizes compressor wear.
- External and internal compressor motor protection.
- Complete oil charge.

Refrigerant Circuit
- Unit sizes 060-190 have dual independent refrigerant circuits.
- Unit sizes 210-300 have three independent refrigerant circuits.
- Unit sizes 315-390 have four independent refrigerant circuits.
- Low and high side fusible plugs.
- Moisture indicating sight glass.
- Electronic expansion valve with integral sight glass.
- Filter drier, removable core. Optional non-removable core filter drier is available for unit sizes 060-100.
- Discharge and liquid line service valves. An optional suction service valve is available.
- Complete operating refrigerant charge, except for remote cooler option.

Air-Cooled Condenser
- Air-cooled condenser coils are constructed with aluminum plate fins (copper fins optional) mechanically bonded to seamless copper tubes with an integral subcooing circuit.
- Specially designed 3-phase, direct-drive, condenser-fan motors, permanently lubricated bearings.
- External and internal fan motor protection.
- Condenser fans are 9-blade, shrouded axial type, statically and dynamically balanced, discharging air vertically.

Cooler
- Integral shell and tube cooler with 3/4-in. (19 mm) closed cell polyvinyl chloride foam insulation with a maximum waterside pressure of 300 psig (2068 kPa).

Controls
- Microprocessor-based leaving water temperature control with return water compensation.
- Loss of charge protection included.
- Automatic lead-lag circuit operation.
- Seven-day time schedule.
- Chilled water pump start/stop control and primary/stand-by sequencing to ensure equal pump run time.
- Dual chiller control for parallel chiller applications without additional hardware, modules, or control panels.
- Unoccupied low sound operation to limit condenser fan sound during scheduled periods.
- Maintenance scheduling to signal maintenance activities for pumps and strainers.
- Low chilled water flow protection is provided via an electronic thermal dispersion flow switch.
- High-pressure switch.
- Intermediate season head pressure control.
- Microprocessor control includes keypad with diagnostic display with access to set points, time and date, system status including % capacity, operating temperatures and pressures, and alarm conditions.
- Periodic pump start to ensure pump seals are properly maintained during off-season.

Cabinet
- Cabinet constructed of galvanized steel, phosphatized zinc, with electrostatically applied high solids, polyester baked enamel finish with hinged access panels.

Hydronic Package Option
- Optional hydronic pump packages are available (unit sizes 060-190) in single and dual pump arrangements with a maximum waterside pressure of 150 psi (1034 kPa). A strainer, combination valve, and pressure taps are provided with the package.
### PERFORMANCE DATA (English)

<table>
<thead>
<tr>
<th>UNIT</th>
<th>Capacity</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor Power Input</td>
<td>kW</td>
<td></td>
</tr>
<tr>
<td>Unit Power Input</td>
<td>kW</td>
<td></td>
</tr>
<tr>
<td>Max. Operating Outdoor Temperature</td>
<td>°F</td>
<td></td>
</tr>
<tr>
<td>Capacity Control Steps</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Minimum Capacity</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Condenser Entering Air Temperature</td>
<td>°F</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COOLER</th>
<th>Entering Water Temperature</th>
<th>°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaving Water Temperature</td>
<td>°F</td>
<td></td>
</tr>
<tr>
<td>Chilled Water Flow</td>
<td>gpm</td>
<td></td>
</tr>
<tr>
<td>Chilled Water Pressure Drop</td>
<td>ft wg</td>
<td></td>
</tr>
<tr>
<td>Fouling Factor</td>
<td>hr ft² °F/Btu</td>
<td></td>
</tr>
<tr>
<td>Fluid Concentration</td>
<td>%</td>
<td></td>
</tr>
</tbody>
</table>

### PERFORMANCE DATA (SI)

<table>
<thead>
<tr>
<th>UNIT</th>
<th>Capacity</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor Power Input</td>
<td>kW</td>
<td></td>
</tr>
<tr>
<td>Unit Power Input</td>
<td>kW</td>
<td></td>
</tr>
<tr>
<td>Max. Operating Outdoor Temperature</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Capacity Control Steps</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Minimum Capacity</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Condenser Entering Air Temperature</td>
<td>°C</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COOLER</th>
<th>Entering Water Temperature</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaving Water Temperature</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Chilled Water Flow</td>
<td>l/s</td>
<td></td>
</tr>
<tr>
<td>Chilled Water Pressure Drop</td>
<td>m wg</td>
<td></td>
</tr>
<tr>
<td>Fouling Factor</td>
<td>m² °C/W</td>
<td></td>
</tr>
<tr>
<td>Fluid Concentration</td>
<td>%</td>
<td></td>
</tr>
</tbody>
</table>

### ELECTRICAL DATA

<table>
<thead>
<tr>
<th>Power Supply to Unit</th>
<th>V, 3 ph, 60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Connection</td>
<td>Single</td>
</tr>
<tr>
<td>Minimum Circuit Ampacity</td>
<td></td>
</tr>
<tr>
<td>Max. Fuse Amps</td>
<td></td>
</tr>
<tr>
<td>Recommended Fuse Amps</td>
<td></td>
</tr>
</tbody>
</table>

### OPTIONS AND ACCESSORIES

#### FACTORY-INSTALLED OPTIONS
- Pre-Coat Aluminum Fin/Copper Tube Condenser Coil
- E-Coat Aluminum Fin/Copper Tube Condenser Coil
- Copper Fin/Copper Tube Condenser Coil
- E-Coat Copper Fin/Copper Tube Condenser Coil
- BACnet™ Translator
- Compressor Sound Enclosures
- Condenser Coil Trim Panels
- Cooler Heaters
- Energy Management Module
- Hail Guards
- LON Translator
- Minimum Load Control
- Low Ambient Temperature Head Pressure Control
- Non-Fused Disconnect
- Non-Removable Core Filter Drier (060-100)
- Remote Cooler (060-190)
- Service Package (GFI-CO, Remote Service Port)
- Security Grilles, Upper and Lower
- Suction Line Insulation
- Suction Service Valve
- Medium Temperature Brine Operation
- Hydronic Package
  - Single
  - Dual
  - ____ Hp

#### FIELD-INSTALLED ACCESSORIES
- BACnet Translator
- Chillervisor System Manager
- Condenser Coil Trim Panels
- DataLINK™ Control
- DataPort™ Control
- Energy Management Module
- Ground Fault Interrupter-Convenience Outlet (GFI-CO)
- Hail Guards
- LON Translator
- Minimum Load Control
- Low Ambient Temperature Head Pressure Control
- Navigator™ Display
- Remote Cooler (060-190)
- Remote Enhanced Display
- Remote Service Port
- Security Grilles, Lower
- Security Grilles, Upper
- Signal Repeater
- Signal Repeater, Power Supply
CERTIFIED DIMENSION PRINT

SIZE AND NOTES:

1. UNIT MUST HAVE CLEARANCES AS FOLLOWS:
   TOP: 3" MINIMUM
   SIDES AND END: 3" FROM SOIL SURFACE
   2. DEVICES LOCATED ON ELECTRICAL PANELs AND FILTER OUTFIT OF EACH CIRCUIT AND HAVE 1/4" FLARE CONNECTION.

3. COOLING TOWER:

   - SERVICE AREA 12" x 12" on each side of the unit
   - 1447.05 (37.03)
   - 2030.51 (169.72)
   - 2360.51 (200.01)
   - 4132.06 (824.91)
   - 2238.28 (100.96)
   - 2236.28 (100.96)
   - 2192.40 (86.25)
   - 2180.40 (86.25)

   COOLER TOWER SERVICE AREA:
   - Service Area 12" x 24" on each side of the unit
   - 2360.51 (200.01)
   - 2360.51 (200.01)
   - 4132.06 (824.91)
   - 2238.28 (100.96)

   SERVICE AREA 12" x 24" on each side of the unit
   - ENTERING WATER: 6" VENTILATING
   - LEAVING WATER: 6" VENTILATING
   - COOLING TOWER:
   - COOLER DIVIDED BY 3/4" VENTILATING
   - ENTERING COOLER: 10" VENTILATING
   - LEAVING COOLER: 10" VENTILATING

   FRONT VIEW:
   - WEIGHT MAX. WEIGHT CENTER OF GRAVITY
   - 30RB-300: 1370 0 (229,33) (18,08)
   - 30RB-300 AIR COOLED CHILLER 00DCN500001200A

   TOP VIEW:
   - 400.00 (1,96)
   - 280.00 (1,96)
   - 45.00 (1,17)
   - 100.00 (3,94)
   - 200.00 (7,81)
   - 200.00 (7,81)
   - 220.21.07

   SIDE VIEW:
   - 30.00 (1,17)
   - 664.02 (134.02)
   - 2556.30 (844.03)
   - 2556.30 (844.03)
   - AIR FLOW:
   - SCROLLING MARQUEE DISPLAY
   - FIELD CONTROL WIRING

   DRAWN AND CHECKED:
   - 05/10/05
   - 03/07/05

   SCALE 1:5

   DATE 05/10/05 03/07/05 30RB-300 AIR COOLED CHILLER 00DCN5000001200A

   REF. C