

# *Now In Production*

*APRIL 2008*



## **Ameripath Lab, Tampa, FL**

One (1) Custom new single zone roof top unit with 69 tons of DX cooling and 12,210 cfm of airflow. The unit is manufactured for **seacoast environment**.

**Representative** : Todd Whitson & Associates., 13224 Summer Rain Dr., Orlando, FL  
Todd Whitson, Phone 407-619-8464 ; Fax 407-275-9467 ; [umprep@aol.com](mailto:umprep@aol.com)



The unit is provided with three (3) equal refrigeration circuits, each circuit is capable of providing 50% of the unit total cooling capacity. One circuit is completely redundant and all circuits are provided with hot gas bypass. The DX coils are Electro Fin coated for seacoast environment.



Two direct drive airfoil SWSI plenum blowers are provided with premium efficiency motors and VFD'S. The blowers are also provided with 2" seismic spring isolators and blower isolation dampers. Each fan is designed to provide 75% of the total airflow.



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The condensing section consists of three (3) semi-hermetic reciprocating Copeland compressors, Electro Fin coated condenser coils with stainless steel coil casing and compressor support. The condenser fan speed is controlled with VFD for head pressure controls down to 30 deg F ambient.



Aluminum exterior panels, hinged access doors with single door handle and multiple latches, 2" pleated pre-filters, 12" deep 95% face loaded final filters, and aluminum airfoil outside air damper are some of the features provided for this unit.



# ENGINEERING SPECIFICATIONS

**JOB NAME** AMERIPATH  
**LOCATION** TAMPA, FL  
**DATE PREPARED** 12/13/07  
**SEASONS-4 REFERENCE #** 9986  
**UNIT MODEL #** 3SJK38-0693-XXXXX-12SE  
**UNIT DESIGNATION** RTU-1  
**SYSTEM VOLTAGE** 208/3/60

## DESIGN DATA

|   |         |
|---|---------|
| TOTAL COOLING CAPACITY (BTUH):          | 832,192 |
| SENSIBLE CAPACITY (BTUH):               | 482,706 |
| TOTAL AIRFLOW (CFM)                     | 12,120  |
| OUTDOOR AIR (CFM)                       | 6,545   |
| ESTIMATED REFRIGERANT CHARGE (LBS. R22) | 320     |

## COMPRESSOR SECTION

### COMPRESSOR:

|                    |                 |
|--------------------|-----------------|
| TYPE               | COPELAND DISCUS |
| NUMBER             | 2               |
| STAGES OF CAPACITY | 6               |

## AIR COOLED CONDENSER SECTION

### CONDENSER COIL:

|                                   |           |
|-----------------------------------|-----------|
| COIL FACE AREA/ROWS/FPI           | 91.0/6/10 |
| DESIGN AMBIENT TEMPERATURE (FDB): | 95.0      |

### CONDENSER FANS:

|         |           |
|---------|-----------|
| TYPE    | PROPELLER |
| DIA/RPM | 30/1,140  |
| QTY/HP  | 8/1.5     |

## PRE COOLING CIRCUIT

|                                 |           |
|---------------------------------|-----------|
| FACE AREA (SQ-FT)               | 25.0      |
| ROWS/FPI                        | 6/9       |
| COIL CIRCUITS (NUMBER)          | 1         |
| TOTAL CAPACITY (BTUH)           | 459,302   |
| SENSIBLE CAPACITY (BTUH)        | 307,164   |
| ENTERING AIR TEMP (FDB/FWB)     | 84.2/70.6 |
| COIL LEAVING AIR TEMP (FDB/FWB) | 61.2/59.3 |
| CONDITIONED AIR (CFM)           | 12,120    |

## DEHUMIDIFICATION CIRCUIT

|                                 |           |
|---------------------------------|-----------|
| FACE AREA (SQ-FT)               | 25.0      |
| ROWS/FPI                        | 6/9       |
| COIL CIRCUITS (NUMBER)          | 1         |
| TOTAL CAPACITY (BTUH)           | 372,890   |
| SENSIBLE CAPACITY (BTUH)        | 175,542   |
| ENTERING AIR TEMP (FDB/FWB)     | 61.2/59.3 |
| COIL LEAVING AIR TEMP (FDB/FWB) | 48.0/47.8 |
| CONDITIONED AIR (CFM)           | 12,120    |

## ENGINEERING SPECIFICATIONS

### SUPPLY AIR BLOWER SECTION

|                                   |                |
|-----------------------------------|----------------|
| TYPE                              | AF SWSI PLENUM |
| NUMBER/SIZE                       | 2/24.5"        |
| AIRFLOW (CFM)                     | 12,120         |
| TOTAL STATIC PRESSURE (TSP) IN WC | 5.17           |
| EXTERNAL STATIC (ESP) IN WC       | 1.50           |
| DESIGN FAN SPEED (RPM)            | 1,644          |
| FAN BHP (INCLUDING DRIVE LOSSES)  | 2 @ 6.5        |
| MOTOR HP                          | 2 @ 10         |
| MOTOR DRIVE                       | DIRECT DRIVE   |

NOTE: EACH BLOWER SIZED FOR 75% OF TOTAL DESIGN AIRFLOW

### FILTER SECTION

|                         |                  |
|-------------------------|------------------|
| TYPE                    | 2" PLEATED       |
| NUMBER/SIZE             | 6/24x24, 2/12x24 |
| TOTAL FACE AREA (SQ-FT) | 28.0             |
| FACE VELOCITY (FPM)     | 433              |

### FINAL FILTER SECTION

|                         |                                |
|-------------------------|--------------------------------|
| TYPE                    | 12" CARTRIDGE (95% EFFICIENCY) |
| NUMBER/SIZE             | 9/24x24                        |
| TOTAL FACE AREA (SQ-FT) | 36.0                           |
| FACE VELOCITY (FPM)     | 337                            |

### REDUNDANT CIRCUIT

|  |      |
|--|------|
| AN ADDITIONAL REFRIGERATION CIRCUIT IS PROVIDED AND IS REDUNDANT | 0.00 |
| TO THE FIRST 2 CIRCUITS SHOWN ABOVE. THE COIL SIZE,              | 0.00 |
| COMPRESSOR SIZE, AND CIRCUITING ARE IDENTICAL TO ABOVE.          | 0.00 |

**UNIT WEIGHT (LBS)** 15,350

SEASONS 4

ENGINEERING AND MANUFACTURING HVAC EQUIPMENT SINCE 1971

# DIMENSIONAL DATA

AMERIPATH  
TAMPA, FL.  
RTU-1

96

183 1/4

CONTROL PANEL

12x6 ELEC. CHASE

28

60

8

80

8

⊕

⊕

⊕

⊕

⊕

⊕

1-1/4" FPT DRAIN

1-1/4" FPT DRAIN

1-1/4" FPT DRAIN

CONDENSING SECTION

101

151

20

256 1/2

20

8

455 1/2

R.A. PLENUM

O.A. DAMPER

O.A. INTAKE LOUVER

PRE FILTERS

DX COIL CKT-2

DX COIL CKT-1

DX COIL CKT-2

S.A. BLOWERS

FINAL FILTERS

SA

RA

- ⊕ HINGED ACCESS DOOR
- ⊙ SCREW-ON ACCESS DOOR
- ⊖ LIFT-OFF ACCESS DOOR

REV. 2: 03/21/2008 JDP  
REV. 1: 02/05/2008 JDP  
12/13/2007 JDP 9986000JP

NOTE: O.A./E.A. LOUVERS, FURNACE VENT CAPS, ETC. MAY REQUIRE FIELD INSTALLATION

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