|  |  |  |  |
| --- | --- | --- | --- |
| Job Information | | *Technical Data Sheet* |  |
| **Job Name** | 1095040 - NDSU Engineering Building 2024 | |
| **Date** | 7/28/2025 | |
| **Submitted By** | Jeff Foss | |
| **Software Version** | 06.70 | |
| **Unit Tag** | AHU-10 | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Unit Overview** | | | | |
| **Model Number** | **Voltage**  V/Hz/Phase | **Airflow**  **CFM** | **External Static Pressure**  **inH₂O** | **Design Cooling Capacity**  Btu/hr |
| BCVE0301 | 460/60/3 | 1650 | 0.75 | 47575 |

|  |  |
| --- | --- |
| Unit | |
| **Model Number:** | BCVE0301 |
| **Unit Arrangement:** | Vertical |
| **Altitude:** | 0 ft |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Physical** | | | | |
| **Dimensions and Weight (wet)** | | | | |
| **Length** | **Height** | | **Width** | **Weight** |
| 68 in | 61.5 in | | 49.5 in | 512 lb |
| **Construction** | | | | |
| **Insulation and Liners:** | | 1" Injected Foam, R-6, Galvanized Steel Liner | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Electrical** | | | |
| **Field Connection** | **MCA** | **MROPD** | **SCCR** |
| Disconnect Switch | 7.0 A | 15 A | 5 kA |

|  |
| --- |
| **Filter** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Filter Access** | **Filter Depth** | | **MERV Rating** | | **(Quantity) Height x Width x Depth** |
| 1st Filter | 2nd Filter | 1st Filter | 2nd Filter | (each bank) |
| Side | 2 in | 2 in | MERV 8 | MERV 13 | (2) 24 x 20 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Primary Hydronic Coil** | | | | | | | | | |
| **Physical** | | | | | | | | | |
| **Fins per Inch** | | **Rows** | | **Casing Material** | | **Face Area**  **ft²** | | **Face Velocity**  **ft/min** | | |
| 12 | | 6 | | Galvanized Steel | | 6.2 | | 264.9 | | |
| **Connection** | | | | | | | | | |
| **Size** | | | **Type** | | | | **Location** | | |
| 1.38 | | | F-SWT | | | | Right Hand | | |
| **Drain Pan** | | | | | | | | | |
| **Material** | | | | | **Connection** | | | | |
| Stainless Steel | | | | | 0.75 in | | | | |
| **Performance** | | | | | | | | | |
| **Capacity** | | | **Air Temperature** | | | | | | |
| **Total**  Btu/hr | **Sensible**  Btu/hr | | **Entering** | | | | **Leaving** | | |
| **Dry Bulb**  °F | | **Wet Bulb**  °F | | **Dry Bulb**  °F | | **Wet Bulb**  °F |
| 47575 | 40888 | | 77.0 | | 63.9 | | 54.3 | | 54.2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Fluid** | | | | |
| **Type** | **Entering**  **Temperature**  °F | **Leaving**  **Temperature**  °F | **Flow Rate**  gpm | **Pressure Drop**  ft H₂O |
| Ethylene | 42.0 | 57.0 | 7.2 | 4.34 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Secondary Hydronic Coil** | | | | | | | | |
| **Physical** | | | | | | | |
| **Fins per Inch** | | **Rows** | | **Casing Material** | **Face Area**  **ft²** | | **Face Velocity**  **ft/min** | |
| 12 | | 1 | | Galvanized Steel | 6.2 | | 264.9 | |
| **Connection** | | | | | | | |
| **Size** | | | **Type** | | | **Location** | |
| 0.62 | | | F-SWT | | | Right Hand | |
| **Performance** | | | | | | | |
| **Total**  Btu/hr | | | **Air Temperature** | | | | |
| **Entering Dry Bulb**  °F | | | **Leaving Dry Bulb**  °F | |
| 69768 | | | 57.0 | | | 95.7 | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Fluid** | | | | | |
| **Type** | **Glycol Concentration**  % | **Entering Temperature**  °F | **Leaving Temperature**  °F | **Flow Rate**  gpm | **Pressure Drop**  ft H₂O |
| Ethylene | 40 | 160.0 | 140.8 | 8.0 | 1.04 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supply Fan** | | | | | | | | | |
| **Performance** | | | | | | | | | |
| **Airflow** | **Total Static Pressure** | | **Fan Speed** | **Controller Input Signal** | **Brake Horsepower** | **Total Input Power** | | **Fan Energy Index** | **Altitude** |
| 1650 | 1.32 inH₂O | | 1695 rpm | 5.4 VDC | 0.50 HP | 0.61 HP | | 1.359 | 0 ft |
| **Motor** | | | | | | | | | |
| **Type** | | **Horsepower** | | **Motor Control** | | | **FLA** | | |
| ECM Plenum | | 4.42 Hp | | 0-10V Modulating | | | 5.6 A | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Unit Discharge Conditions** | | | | | | | |
| **AirTemperature** | | | | | | |
| **Motor Heat**  Btu/hr | **Unit Leaving Dry Bulb**  °F | | **Unit Leaving Wet Bulb**  °F | | **Unit Leaving Dewpoint**  °F | |
| 2024 | | 55.5 | | 54.6 | | 53.9 | |

|  |  |
| --- | --- |
| **Internal Pressure Drop Calculation** | |
| **External Static Pressure:** | 0.75 inH₂O |
| **Filter:** | 0.07 inH₂O |
| **Second Filter:** | 0.18 inH₂O |
| **Chilled Water Coil:** | 0.27 inH₂O |
| **Hot Water Heat:** | 0.04 inH₂O |
| **Total Static Pressure:** | 1.32 inH₂O |

|  |  |
| --- | --- |
| Options | |
| **Controls** | |
| **Overflow Switch:** | Factory mounted Overflow Switch |
| **Freezestat:** | Factory mounted Freezestat |

|  |  |
| --- | --- |
| Warranty | |
| **Parts:** | Standard warranty |

|  |  |
| --- | --- |
| **AHRI Certification** | |
|  | All equipment is rated and certified in accordance with AHRI 430. |

|  |
| --- |
| **Notes** |