

**Report By:**

National TAB  
1329 E. KEMPER ROAD  
SUITE 4210  
CINCINNATI, OH 45246



**Report: RecCTRRTU-Eval**  
**Function: Test, Adjust, & Balance**  
**Date: 07/03/2025**  
**Completed By: National TAB**

# PROJECT

## Blue Ash Rec AHU1 EVAL (Blue Ash, OH)

4433 Cooper Road

Blue Ash, OH

### Client

Triton Services, Inc.  
8162 Duke Boulevard  
Mason, OH 45040

# National TAB

Project: Blue Ash Rec AHU1 EVAL (Blue Ash, OH)

## Table Of Contents

| Section | Page # |
|---------|--------|
| Summary | 3      |
| AHU/RTU | 4      |

## **AHU/RTU1 EVALUATION:**

The scope of the work was to get total supply airflow & static pressure profile. Also, to set the outside air for the unit.

The unit sits on lower roof & has (3) supply duct systems that come off the discharge of the RTU unit. Each duct is exposed & runs along the roof & then drops down into their independent curbs to serve the space. The duct system is connected to VAV systems. Before taking traverse we met with the facilities team & had him drive all the VAV systems 100% open. He performed this task & stated they were open per the BMS system. We were not contracted out to balance the VAV's or verify functions of each of the boxes. We then traversed all 3 ducts at current operating point at 40 HZ. The readings for the traverses were recorded at 40 HZ. Then we increased the fan speed as much as possible up to full load amps which was reached at 49 HZ. We then used Fan laws to calculate final supply air flow rate.

Our team is going to stop by Monday afternoon to look for any system affect at duct discharge and any other quick review of how the unit is operating. I would like to get access to the BMS to see how the boxes are commanding. Future analysis may be required to physically make sure that all VAV's are opening as commanded & there are no other obstructions being caused down stream of system.

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Project: Blue Ash Rec AHU1 EVAL (Blue Ash, OH)

System/Unit: AHU/RTU



Asset: AHU1

AREA:1ST FLR-AREA B

| Unit Data     |               |                   |
|---------------|---------------|-------------------|
|               | Design        | Actual            |
| MFG           | Carrier       | Carrier           |
| Model Num     | 39MW Size 40W | 39MW Size 40W [2] |
| Configuration | -             | HORIZONTAL        |

| Motor Data     |        |                 |
|----------------|--------|-----------------|
|                | Design | Actual          |
| Frame          | -      | 284T [2]        |
| Horsepower     | -      | 25 [2]          |
| Motor Rpm      | -      | 1800 [2]        |
| Phase          | -      | 3 [2]           |
| Rated Voltage  | -      | 208-230/460 [2] |
| Rated Amperage | -      | 31 [2]          |

| Test Data         |        |                |
|-------------------|--------|----------------|
|                   | Design | Actual         |
| SF CFM            | -      | 19840          |
| SF RPM            | -      | 1509 motor [1] |
| RA CFM            | -      | 16576          |
| OA CFM            | -      | 3264           |
| RL Voltage        | -      | 450 ave [1]    |
| RL Amperage       | -      | 28.0 [1]       |
| Brake Horse Power | -      | 20.7 [1]       |

| Performance Data  |        |        |
|-------------------|--------|--------|
|                   | Design | Actual |
| MA Plenum SP      | -      | -0.30" |
| Fan Suction SP    | -      | -1.37" |
| Fan Discharge SP  | -      | 0.98"  |
| Total ESP         | -      | 1.28"  |
| Fan Total SP      | -      | 2.35"  |
| Cooling Coil P.D. | -      | 1.07"* |

Completed By: Gabe Merk on 11/05/2025

Notes:

[1] DATA TAKEN FROM VFD OUTPUT

[2] FROM SUBMITTAL DATA ONLY

VFD READ AT 51 HZ 28 AMPS 10/28

\*prefilter and cooling coil PD combined

Traverses at 48HZ :

50"x24"= 6893 cfm

30"x22"= 6140 cfm

42"x18"= 5640 cfm

Written By: Gabe Merk on 11/05/2025