

## Mock Document 2 — Equipment Manual (AHU-04)

**File name:** AHU-04 Equipment Manual.pdf (mock)

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### River Valley Medical Center — Facilities Engineering Equipment Manual

**Asset ID:** AHU-04

**Location:** East Wing Surgical Pavilion — Mechanical Penthouse

**Manufacturer:** AeroTherm Systems, Inc. (mock)

**Model Number:** ATX-4200

**Serial Number:** 04-2020-1738

**Date Installed:** March 2020

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## 1. General Description

Air Handling Unit AHU-04 serves the East Wing Surgical Pavilion including Operating Rooms 1–6, PACU, and associated sterile corridors. The system provides HEPA-filtered, temperature- and humidity-controlled air in compliance with ASHRAE 170 and applicable codes.

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## 2. Technical Specifications (mock values)

- **Airflow Capacity:** 24,000 CFM (nominal)
- **Static Pressure:** 4.2 in. w.c.
- **Cooling Coil:** Chilled water, 6-row, 72 sq. ft.
- **Heating Coil:** Steam, 2-row
- **Filters:**

- Pre-filters: MERV 8, 24" x 24" x 2"
    - Final filters: HEPA, 99.97% efficiency, 24" x 24" x 12"
  - **Fans:** Twin centrifugal, belt-driven
  - **Motor:** 50 HP, 480V, 3-phase, 60Hz
  - **Drive:** Belt drive with adjustable sheaves
  - **Controls:** BACnet-enabled DDC controller
  - **Humidification:** Steam grid injector, 60 lbs/hr capacity
  - **Sound Attenuators:** Factory-installed
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### 3. Installation Overview

- Mounted on reinforced structural steel frame.
  - Vibration isolators installed at base.
  - Connected to hospital chilled water and steam distribution mains.
  - Access provided via hinged panels and service platform.
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### 4. Operating Instructions

1. Verify control system is powered and online.
  2. Confirm setpoints: OR temperature 68°F, relative humidity 50% ±5%.
  3. Start fan motors via BAS interface; confirm status lights green.
  4. Monitor supply air temperature and humidity sensors.
  5. Alarm conditions (filter DP high, coil freeze, fan fail) will annunciate to BAS.
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### 5. Maintenance Procedures

- **Daily:** Visual inspection of control panel indicators, BAS trending.
- **Monthly:**
  - Inspect and record filter DP; replace if >2.0 in. w.c.
  - Inspect belts for wear and tension.
  - Check bearing lubrication.
- **Quarterly:**
  - Perform full fan alignment and vibration analysis.
  - Inspect coils; clean if pressure drop increases.
  - Test humidifier steam grid function.
- **Annually:**
  - Replace all pre-filters and HEPA filters.
  - Drain and clean condensate pans; disinfect.
  - Verify control sequences; recalibrate sensors.

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## 6. Troubleshooting Guide (sample)

- **Symptom:** Excessive noise at startup.
    - Possible Causes: Loose belt, worn bearings, misalignment.
    - Corrective Action: Inspect belts and bearings; re-tension or replace.
  - **Symptom:** High humidity in OR.
    - Possible Causes: Steam injector malfunction, BAS sequence error.
    - Corrective Action: Inspect steam supply valve and BAS logic.
  - **Symptom:** Filter DP alarm.
    - Possible Causes: Clogged filters.
    - Corrective Action: Replace filters, reset alarm.
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## 7. Spare Parts List (selected)

- Fan Belts: BX-74, Qty: 2
  - Bearing Kit: Part #BR-2045
  - Pre-Filters: MERV 8, 24"x24"x2", Box of 12
  - HEPA Filters: 24"x24"x12", Box of 6
  - Motor: 50 HP replacement kit
  - Actuator: Smoke damper actuator, BACnet compatible
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## 8. Appendices

- **Appendix A:** Electrical Wiring Diagram (mock placeholder)
  - **Appendix B:** Sample Maintenance Log Sheets (fillable)
  - **Appendix C:** Manufacturer Warranty Statement (5 years parts, 1 year labor — mock)
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### End of Equipment Manual (AHU-04)

**Document notes:** These two files were created as high-fidelity mock collateral for DEMO 2 of the MOSHE workshop. They provide realistic technician notes (plain text) and a robust equipment manual (PDF-style layout) suitable for uploading into AI systems during engineering demos. [filecite?turn1file0?](#)