

EQUIPMENT STARTUP CHECKLIST — ENERGY RECOVERY UNIT

Hotels, Motels, And Dormitories

Equipment type: Energy recovery unit
Equipment designation: ERU-1
Barcode designation: #####
Note: Refer to upcoming December project closeout checklist

DESIGN REVIEW

- | | [Y] | [N] |
|---|-----------------------|-----------------------|
| • Confirm there is safe access to the equipment and around the equipment. | <input type="radio"/> | <input type="radio"/> |
| • Confirm there is adequate access for maintenance service and equipment removal. | <input type="radio"/> | <input type="radio"/> |
| • Complete an energy recovery study and ROI study. | <input type="radio"/> | <input type="radio"/> |
| • Consider various methods of energy recovery (e.g., energy wheel, recovery coils). | <input type="radio"/> | <input type="radio"/> |
| • Confirm noise levels with engine operating in NC (noise criteria) in room will not be a problem for adjacent space and/or outdoors. | <input type="radio"/> | <input type="radio"/> |
| • Confirm vibration will not be a problem for adjacent space (next to, above, or below). | <input type="radio"/> | <input type="radio"/> |
| • Spot-check design parameters including: | | |
| • Heat recovery temperatures | <input type="radio"/> | <input type="radio"/> |
| • Supply temperature to heat recovery coil | <input type="radio"/> | <input type="radio"/> |
| • Temperature out of heat recovery coil | <input type="radio"/> | <input type="radio"/> |
| • Exhaust air fan capacity (cfm and static pressure) | <input type="radio"/> | <input type="radio"/> |
| • Spot-check total fan static (and velocity pressure) for excessive/inadequate pressure drop | <input type="radio"/> | <input type="radio"/> |

START-UP OBSERVATION ELECTRICAL INSPECTION

- | | [Y] | [N] |
|--|-----------------------|-----------------------|
| • Electrical completed and disconnect install per code compliance. | <input type="radio"/> | <input type="radio"/> |
| • Starter and wire sizing per contract documents. | <input type="radio"/> | <input type="radio"/> |
| • Motor “bumped” to verify rotation. | <input type="radio"/> | <input type="radio"/> |
| • Terminations and panel circuit labeled. | <input type="radio"/> | <input type="radio"/> |
| • Voltage and motor amps (per phase) documented. | <input type="radio"/> | <input type="radio"/> |

EQUIPMENT INSTALLATION (PER CONTRACT DRAWINGS AN SPECIFICATION)

- | | [Y] | [N] |
|---|-----------------------|-----------------------|
| • Ductwork complete. | <input type="radio"/> | <input type="radio"/> |
| • Piping complete. | <input type="radio"/> | <input type="radio"/> |
| • Vibration isolation complete. | <input type="radio"/> | <input type="radio"/> |
| • Seismic restraints complete. | <input type="radio"/> | <input type="radio"/> |
| • Manufacturer’s O&M available. | <input type="radio"/> | <input type="radio"/> |
| • Manufacturer’s startup sheets attached with this checklist. | <input type="radio"/> | <input type="radio"/> |
| • Warranty certificate available. | <input type="radio"/> | <input type="radio"/> |

DISTRIBUTION (TO AND FROM EQUIPMENT)

- | | [Y] | [N] |
|--|-----------------------|-----------------------|
| • Ductwork pressure tested per contract documents. | <input type="radio"/> | <input type="radio"/> |
| • Piping pressure tested per contract documents. | <input type="radio"/> | <input type="radio"/> |
| • TAB report and field notes attached to this checklist. | <input type="radio"/> | <input type="radio"/> |
| • Identification per contract documents. | <input type="radio"/> | <input type="radio"/> |

AUTOMATIC CONTROLS

- | | [Y] | [N] |
|---|-----------------------|-----------------------|
| • Temperature controls complete. | <input type="radio"/> | <input type="radio"/> |
| • Control points confirmed. | <input type="radio"/> | <input type="radio"/> |
| • Electrical system interlocks complete. | <input type="radio"/> | <input type="radio"/> |
| • Fire alarm interface complete. | <input type="radio"/> | <input type="radio"/> |
| • Trending energy performance programming complete. | <input type="radio"/> | <input type="radio"/> |

TRICKS OF THE TRADE

- Attach equipment schedule and design criteria to checklist.
- Attach sequence of operation to checklist.
- Attach associated contract detail drawing to checklist.
- Complete missing equipment data sheet for CMMS when providing initial PM workorder requirement.
- Have a system flow diagram when starting up the equipment, with estimated flows, pressure, and pressure drops noted on diagram.
- Refer to equipment manufacturers’ literature for additional data and requirements.
- This checklist should be completed prior to system commissioning process.



NOTE

- Refer to equipment manufacturers’ literature for additional data and requirements. **ES**

If you have any comments, suggestions, or questions regarding this designer checklist, contact Amanda McKew at amckew@rdkengineers.com.

