READY TO INSPECT — FIELD CHECKLIST

Energy recovery ventilator (ERV) annual maintenance checklist

The annual energy recovery ventilator service is the deep pass: the measurements, cleanings and tests a quarterly round doesn't reach. This checklist keeps the full service on record with the photos that make it defensible later. Work is commonly verified against IMC, manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The HVAC service tech on the annual, with the unit opened up and instruments on the airflows. When: Once a year, when the wheel or core can be pulled for real cleaning and the outdoor-air balance can be measured rather than assumed.

Before the teardown

- [ ] Recovery media type read from the nameplate before cleaning
  Nameplate or manual checked for wheel or core type and media, so a washable plate, a vacuum-only membrane core or a desiccant coating gets the right cleaning method.
  1 photo required
- [ ] Every ERV feed, preheat and wheel included, locked and tagged
  Start tried to prove it dead; with the media refitted, powered tests run under the procedure's temporary release (clear, guards on, locks off by their owner), then re-locked.
  1 photo required

Core and seals

- [ ] Recovery wheel or core removed and deep cleaned
  Media cleaned through its depth per the manufacturer's method, not just wiped at the face, and refitted square.
  2 photos required
- [ ] Wheel and purge seals inspected and adjusted
  Perimeter and purge seals checked for wear and gap, adjusted or replaced so the airstreams don't cross-leak.
  1 photo required
- [ ] Purge angle checked against the manufacturer's setting
  On wheels with an adjustable purge, the purge plate set to the angle the manual gives for the design pressures; fixed cores and wheels without a purge skip this.
  No photo required
- [ ] Wheel turned by hand for bearing drag and rim wobble
  Hub bearings free and greased where fitted, and the rim running true so seal gaps stay even at every point; fixed cores skip this.
  No photo required
- [ ] Airstream divider and cassette gaskets checked for leak paths
  Partition between the two airstreams and the gaskets around the wheel cassette or core frame intact, with no gap letting exhaust air slip into supply.
  1 photo required

Dampers and economizer

- [ ] Damper actuators and economizer sequence tested
  Actuators driven through their full range, economizer or bypass sequence commanded and observed, end switches and linkage confirmed.
  No photo required

Drives and balance

- [ ] Belts, motors and bearings serviced
  Belts replaced or tensioned, motor amps read against the nameplate, bearings lubricated per the manufacturer.
  1 photo required

- [ ] Supply and exhaust airflow measured and balanced
  Both airflows measured and set to the design values, the building pressure relationship confirmed, readings logged for next year.
  2 photos required
- [ ] Pressures either side of the recovery section compared
  Supply and exhaust static pressures at the wheel or core read with a manometer and set so any leakage runs from supply to exhaust, per the manufacturer's guidance.
  1 photo required
- [ ] Recovery effectiveness worked out after cleaning and balance
  Four airstream temperatures read with airflows set, effectiveness worked out and compared with the rated or commissioning value, a step past the quarterly spot reading.
  1 photo required

Drains and cabinet

- [ ] Drain pans cleaned and cabinet checked
  Pans cleaned and traps primed, cabinet interior and insulation checked for water damage or mold, access panels sealing.
  1 photo required
- [ ] Guards on, locks removed by their owner and the ERV restarted
  Guards and access panels refastened, each lock and tag removed by the tech who hung it, and the unit restarted with both fans and the wheel or core in service.
  1 photo required
- [ ] Annual readings filed beside last year's for the owner
  Airflows, pressures, effectiveness and seal condition recorded against last year's values, with a recommended action for anything that has slipped.
  No photo required