READY TO INSPECT — FIELD CHECKLIST

Motorized control damper annual maintenance checklist

The annual control damper 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 controls or balancing technician on the annual air-side service, when the system can be commanded through its range off normal control. When: Once a year with the air-handler service, when the damper can be driven manually and the closed leakage actually assessed rather than eyeballed.

Preparation

- [ ] **Sequence, balancing report and last year's results in hand**
  Sequence of operation, scheduled fail positions, the outdoor air minimum from the balancing report and last year's leakage and calibration results ready to compare.
  No photo required

- [ ] **Fail-position drops and freeze protection planned with the owner**
  Owner and operator warned which dampers will drop to fail position with fans running, deeper than the quarterly stroke, and freeze stats and coil temperatures watched while outdoor air opens.
  No photo required

Leakage and closure

- [ ] **Closed leakage assessed at the damper**
  Damper commanded fully closed and leakage across it checked by feel, tell-tale or airflow at the plenum; excessive bleed traced to seals or an incomplete stroke.
  2 photos required

- [ ] **Every fan through the damper and actuator power locked**
  Fans and actuator power locked and tagged before seal work; calibration and fail tests run with access doors closed, locks off by whoever hung them, then re-locked.
  1 photo required

- [ ] **Blade seals and stops replaced where worn**
  Edge and jamb seals inspected along their length, worn sections replaced, end stops set so the blades seat fully at the closed command.
  1 photo required

Feedback and calibration

- [ ] **Feedback recalibrated to measured position**
  Actual blade angle established at open, mid and closed, and the position feedback span and zero set to match the real positions.
  2 photos required

- [ ] **Actuator range and current confirmed**
  Actuator driven across its full range under the corrected signal, running smoothly without binding, torque and travel matching the manufacturer's figures.
  1 photo required

- [ ] **Fail position observed on loss of actuator power**
  Actuator power removed with the fans running and the blades seen to go to, or hold at, the fail position the sequence calls for: open, closed or in place.
  1 photo required

- [ ] **Loss of control signal response matched to the sequence**
  On modulating actuators, the signal lifted at the controller and the damper seen to take the position the sequence expects, not hunting or holding a stale command.
  No photo required

- [ ] Spring return time checked against the manufacturer's rating
  On spring-return actuators, the spring drives the blades fully to the fail position against airflow within the manufacturer's rated time, without stalling short.
  No photo required

Mechanical service

- [ ] Linkage and pivots lubricated and reset
  Jackshaft bearings, blade pivots and linkage pins cleaned and lubricated per the manufacturer, wear points noted, coupling retightened after service.
  1 photo required

- [ ] Frame mounting and squareness checked in the opening
  Frame square and fastened in the duct or wall opening, no racking that binds the blades, and the seal between the frame and the duct or wall intact.
  1 photo required

- [ ] End or proof switches set to the true blade positions
  Where fitted, switch cams set with the blades held at full open and full closed, and the proof confirmed at the BAS once the damper is back in service.
  No photo required

Return to service

- [ ] Locks off by their owner and the fans back in operation
  Locks and tags removed by the person who hung them, no tools or rags left at the linkage or in the duct, fans restarted and the damper back on automatic control.
  No photo required

- [ ] Annual damper results recorded against the baseline
  Leakage, calibration, fail position and seal findings entered against the damper tag beside last year's results, with open repairs reported to the owner.
  No photo required