READY TO INSPECT — FIELD CHECKLIST

Radiant heating manifold annual maintenance checklist

The annual radiant heating manifold 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 (mechanical code), manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The hydronic service lead on the annual heating service before the season. When: Once a year ahead of the heating season, paired with the boiler service so the whole loop is down at once.

Shutdown and isolation

- [ ] Occupants told which floors go cool and drain hoses run
  Owner and occupants told which zones are off and for how long, water let cool before draining, purge hoses run to a drain or container clear of finishes.
  No photo required

- [ ] Circulator, zone controller and any mixing station locked and tagged
  Every power source feeding the manifold locked by each worker; refilled and vented, then the temporary release for hot checks (people clear, locks off by their owners), re-locked before hands go in.
  1 photo required

Purge and flush

- [ ] Each loop isolated and purged clear of air and debris
  Loops purged one at a time to the drain until the water runs clear and air-free, isolation and purge valves operating without seizing.
  2 photos required

- [ ] System water and treatment checked
  Fill water and treatment confirmed against the manufacturer's guidance, no visible rust or sludge in the purge stream, glycol condition logged where used.
  1 photo required

- [ ] System refilled to the cold-fill pressure after the purge
  Fill valve or makeup brings the system back to its cold-fill setting on the manifold gauge, vents bled again, no loop left drained or valved off.
  1 photo required

Actuators and circulator

- [ ] Zone controller terminations checked before power returns
  Torque-verified at the transformer primary, low-voltage leads at the wiring center and actuators checked secure, no heat marks or pinched cable, before the temporary release.
  1 photo required

- [ ] Every actuator removed, seat checked and re-cycled
  Actuators pulled and the valve pins move freely by hand, seats clean, actuators reseated and confirmed cycling on a call.
  1 photo required

- [ ] Circulator and mixing valve exercised through range
  Pump runs smooth with no bearing noise, mixing valve driven through its range and holding the supply temperature it targets.
  No photo required

- [ ] Floor supply high limit tested where a limit control is fitted
  Limit tripped through its own test function or a setpoint change, hot water to the floor stopped, then reset; test kept short so no floor overheats.
  No photo required

Balance

- [ ] Manifold rebalanced to the loop schedule after purging
  Each flow meter set to its scheduled flow with the system hot and running, settings recorded on the manifold log, no loop left starved.
  2 photos required

- [ ] Return temperature compared at every loop port after balancing
  Each loop's return port read with an IR thermometer once the system settles, a loop running much colder than its neighbors traced for air or blockage.
  1 photo required

Controls and return to service

- [ ] Each thermostat opens only the loops tagged for its room
  One zone raised at a time, only the actuators on that room's tagged loops open, any mismatch in wiring or tags recorded and the loop schedule updated.
  1 photo required

- [ ] Floor surface temperatures surveyed in every zone
  Beyond the quarterly spot read, each zone scanned with an IR camera once up to temperature, against the surface limit and last year's survey, cold areas noted.
  1 photo required

- [ ] Locks removed by whoever hung them and zones returned to auto
  Locks and tags removed by the person who applied them, pump and heat source in auto, thermostats back to the owner's setpoints, drain hoses off and caps on.
  No photo required

- [ ] Loop flows, temperatures and floor changes recorded for the owner
  Final flow per loop, temperatures, pressure, water treatment result and any reported floor covering changes recorded against the manifold tag, repairs listed.
  No photo required