

HVAC rough-in inspection checklist

HVAC rough-in is the last time the work is fully visible. Once the cover inspection passes and the walls, ceilings and slabs close, every defect left behind becomes a demolition bill. This checklist walks the rough-in in the order the work goes in, with the photo each item needs before it gets buried. Work is commonly verified against SMACNA guidance, IMC. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The HVAC foreman walking their own rough-in ahead of the pre-cover release. When: After ductwork is hung, refrigerant lines run and equipment set in place, before insulation, drywall or ceiling grid closes the space.

Ductwork

- ☐ **Duct joints and seams sealed to the required class**
Mastic or listed tape continuous along every joint and seam, no gaps or dry mastic cracking. 2 photos required
- ☐ **Ductwork supported at the required intervals**
Hangers sized for the duct weight, spacing consistent, no duct resting on ceiling tile or piping. 2 photos required
- ☐ **Transitions, takeoffs and dampers installed per the design**
Takeoff size and location match the design duct layout, volume dampers present where called for. 1 photo required
- ☐ **Duct sizes and gauge match the approved shop drawings**
Measured duct dimensions at a sample of runs match the shop drawings, gauge and reinforcement suit the pressure class shown. 1 photo required
- ☐ **Open duct ends and equipment inlets capped against dust**
Collars, open runs and unit inlets covered with plastic or caps while drywall, sanding and cutting go on nearby. 1 photo required

Refrigerant and condensate

- ☐ **Refrigerant line sets brazed and pressure tested**
Nitrogen held during brazing, gauge reading recorded at the start and end of the standing test. 2 photos required
- ☐ **Line set insulation continuous and protected**
Insulation sleeve unbroken at joints and hangers, no compressed or missing sections. 1 photo required
- ☐ **Condensate piping sloped and trapped correctly**
Level check shows fall toward the drain point, trap depth matches the unit's static pressure. 2 photos required
- ☐ **Overflow protection at each cooling unit's drain pan**
Secondary pan, float switch or secondary drain at each unit whose overflow could damage the building, installed as the drawings show. 1 photo required
- ☐ **Condensate terminates at the location shown on the drawings**
Line ends at the drain, receptor or indirect waste shown, with an air gap where called for; nothing dumped into a wall cavity. 1 photo required

Equipment setting

- ☐ **Units set level on their pads, curbs or hangers**
Level across the unit frame, isolation pads or springs seated evenly, no visible tilt. 2 photos required
- ☐ **Clearances maintained around equipment for service access**
Manufacturer's clearance distances open on all service sides, nothing framed or ducted into that space. 1 photo required

- ☐ Nameplate model and capacity match the approved submittal
Model, capacity and voltage on each unit's nameplate match the approved equipment submittal for that tag. 1 photo required

Records before release

- ☐ Duct leakage test sections agreed with the super and tested
Runs the spec requires to be leak tested identified, tested before insulation goes on, and results on file. No photo required
- ☐ Field changes to duct or unit layout marked on the field set
Any reroute, size change or relocated unit noted on the field drawings so the as-builts reflect it. No photo required