



City of Vacaville  
Community Development  
Building Division

## Rough Mechanical Checklist

***This is to be used as a general checklist: it is not inclusive of all code requirements and inspection criteria.***

**Per 2022 California Mechanical Code (CMC)**

### **ROUGH MECHANICAL – GENERAL**

- Equipment shall be listed (and labeled) for its use. All equipment installed per manufacturer's installation instructions, which must be on site when inspector arrives. CMC 303.1. Appliances anchored to resist seismic forces.
- Primary condensate shall terminate in the tailpiece of a lavatory or an approved location (drywell ok), not to drain to public way. Shall not be smaller than the outlet size with a slope of 1/8" per foot. CMC 310.1
- Secondary condensate to terminate in a conspicuous location. CMC 310.2
- Gas fired equipment, in bedroom, bathroom, and closet leading to a bedroom/bath shall comply with CMC 904.
- Type B or L vents-Horizontal vent maximum 75% to the length of the vertical (Horizontal equals less than 45 degrees from vertical, minimum vent slope 1/4" per foot). CMC 802.6.2.2
- Clearance to combustibles: single wall vent 6", double wall (B, L and BW) vent 1" (minimum) Table 802.7.3.3
- Venting systems shall be sized and constructed in accordance with Section 802.6.2.1 through Section 802.6.2.3 and the appliance manufacturer's instructions CMC 802.6.2.
- Main gas shut off valve ahead of meter, outside & readily accessible. CPC chapter 12 Gas test – minimum 10 minutes, twice working pressure, gauge twice test pressure. Gas (appliance) connector shall not pass through a building or appliance wall. CMC 1313.0
- Equipment on roof buildings of more than 15 ft. in height shall have an inside means of access to roof and shall have a guard minimum 42" high if equipment is within 6' of roof edge. CMC 304.3.1
- Smoke alarms and Carbon Monoxide detectors per California Building Code sections 907 and 420 respectively.

### **ENVIRONMENTAL AIR DUCTS: including dryers, bath exhaust, and range hoods**

- Terminate minimum 3ft. from building opening or property line. CMC 502.2.1
- Back draft damper required. CMC 504.1.1

### **CLOTHES DRYER**

- Flexible gas connector maximum 6 feet and not concealed. CMC 504.4.2.2
- Duct shall be smooth metal inside and a maximum 14' with two 90-degree elbows (subtract 2ft. for each additional elbow) shall terminate outside. CMC 504.4.2.1
- Minimum diameter 4". CMC 504.4.2
- No screws allowed into airflow. CMC 504.4

### **BATHROOM EXHAUST FAN**

- Rooms containing bathtubs, showers, spas (bathing fixtures) or water closets shall have mechanical ventilation. CBC 1202.5.2.1

### **RANGE**

- Vertical clearance above range 30" minimum to combustibles. CMC 920.3.2
- Gas shut off valve shall be readily accessible (no tools or special knowledge required). CPC 1212.6 & 1208.10 Install per manufactures listing. Typically 18" minimum clearance to combustibles (cabinets) within 2-3" horizontally.
- Hood and duct made of metal with smooth interior surfaces. CMC 504.3

### **ATTIC/FORCED AIR**

- Minimum opening for access to attic with equipment 22" x 30" or large enough to remove the unit. CMC 304.4
- Maximum Distance from opening 20 feet. CMC 304.4.1
- Solid floor from access door minimum 24 inches wide. CMC 304.4.2
- Minimum 30" deep level platform in front of fire box with 30"x30" clear space in front of unit. CMC 304.4.3
- Minimum attic height 30" (at access). CBC 1208.2
- Switched light at access CMC 304.4.4

### **DUCTS**

- Ducts shall be supported at each change of direction. CMC 603.3
- No combustibles within ducts or plenums, some exceptions see CMC 602.2
- Joints shall be taped or gasketed airtight. CMC 603.10

### **COMBUSTION AIR**

- Minimum vent area 1 sq. in. per 4,000 Btu/hr. each (direct to outdoor, vertical venting). CMC 701.6.1(1)
- Minimum vent area 1 sq. in. per 2,000 Btu/hr. each (direct to outdoor, horizontal venting). CMC 701.6.1(2)
- Dampers shall not be installed in combustion air ducts. CMC 701.12

### **UNDER FLOOR/FORCED AIR**

- FAU minimum support slab 3 inches above grade. CMC 904.3.1
- FAU minimum 6 inches above ground when suspended, 12 inch clear shall be provided on all sides except the control side, which shall have an 18 inch clearance. CMC 906.7
- Required access (to service equipment) minimum 22"x30". CMC 304.4.2 Access maximum 20 ft. to equipment (unobstructed) with solid 24" wide floor. Light fixture at equipment with switch for light at access point. CMC 304.4.4 GFCI outlet near equipment.
- Minimum 30"x30" level work platform at equipment. CMC 304.4.3
- Minimum clearance metal duct to earth 4"/encasement under concrete 2". CMC 603.0
- Install and support flexible duct per manufacturer or SMACNA (with 1" strap every 4 feet).
- Air ducts installed under a floor in a crawl space shall be installed so as to maintain a minimum vertical clearance of 18" for all portions of ducts that would obstruct access to any part of crawl space. CMC 603.2

### **GARAGE/FORCED AIR**

- Min. 18" above floor and protected from vehicle damage. CMC 305.1
- Ducts through one hour fire-rated wall shall be a minimum 26 gauge.
- Combustion Air furnace /inside source. CMC 701.4
- Combustion air openings in upper and lower 12 inches of compartment. CMC 701.6.1