



# Residential Mechanical Cover Inspection

This Residential Inspection Quick Sheet reflects the [2018 Seattle Residential Code](#) (SRC) code requirements. References to the SRC are indicated by R= Residential, M= Mechanical, G= Gas. Please verify the following before scheduling a mechanical cover inspection. Please note that construction projects vary. As such, additional requirements may be needed.

Mechanical cover inspections occur before you insulate or cover any floors, walls, or ceilings.

## Permits and Plans

- Job address shall be posted in a visible location. (R319.1)
- Permit and approved plans are on site and accessible to the inspector. (R105.11)

## Forced Air Furnace

- Heat producing equipment installed shall maintain clearances to combustibles as required by the listing of the appliance, and the manufacturer's installation instructions. (M1402.2, M1306.1)
- Fuel burning appliances cannot be installed in sleeping rooms, bathrooms, toilet rooms, storage closets, or in a space that opens into such rooms or spaces unless they are direct vent or listed for use within a living space. (G2406.2)
- Furnace room passageway is minimum 24 inches wide. (M1305.1.1)
- Working space is 30 inches deep to the unit. Provide clearance of 3 inches along the sides, back, and top. (M1305.1)
- Electrical receptacle is required at or near the appliance. (M1305.1.3.3)

## Underfloor and Attics

- When a furnace is installed in an underfloor area, it is suspended a minimum of 4 inches above grade or installed on a slab extending above adjoining grade. (M1305.1.3.1)
- Switch controlled lighting and receptacle outlet are provided at the required passageway for servicing of equipment. (M1305.1.3.3)

## Garage

- Equipment which has a flame, generates a spark, or uses a glowing ignition source is open to the space in which it is installed and is elevated such that the source of ignition is at least 18 inches above the floor, unless the appliance is flammable vapor ignition resistant. (M1307.3)
- Ducts which penetrate a wall or ceiling separating the garage from the dwelling are 26 gauge with no openings to the garage. (R302.5.2)

## High Efficiency Furnaces

- Condensate drain is required to drain by gravity to an approved place of disposal or install UL 508 approved condensate pump. (M1411.3)
- The drainpipe is minimum 3/4-inch diameter with 1/8-inch per foot slope. (M1411.3.2)

- The inspector will verify the identification of piping material. All manufacturer's ID on all fittings. (M1301.2)

## Ducting

- Duct to ground has a minimum 4-inch clearance. (M1601.4.8)
- Duct in or under concrete is encased by concrete at a minimum of 2 inches thick. (M1601.1.2)
- Round ducts have crimped joints lapped a minimum of 1 inch and fastened with (3) sheet-metal screws or rivets equally spaced around the joint. (M1601.4)
- Joints, seams, and fittings of ducts are sealed with mastic or other approved means. (M1601.4.1)
- Flex duct is supported per manufacturer's specifications. (M1601.4.4)
- Metal duct is supported every 10 feet minimum. (M1601.4.4)
- Ducts shall not displace required insulation of walls, floors, or ceilings. Additionally, building cavities may not be used as ducts. (SEC R4030305)
- Venting systems shall not extend into or pass through any fabricated air duct or furnace plenum. (G2427.3.4)
- Return air taken from a room or space is not greater than flow rate of supply air delivered to a room or space. (M1602.2 Item 2)
- Return air cannot be taken from a closet, bathroom, toilet room, kitchen, garage, boiler room, furnace room, unconditioned attic, or other dwelling unit. (M1602.2)
- Return air inlets cannot be located within 10 feet of any fuel burning appliance, fire box, or draft hood located in the same space. (M1602.2 Item 1)
- Ducts, boots, and connectors used for heating or cooling shall be insulated to R-8 in unconditioned spaces. (SEC R403.3.1)
- Local exhaust fan ducts shall be insulated to R-4 minimum to control condensation. (SEC R403.3.5)

## Combustion Air

- The minimum cross section dimension for combustion air ducting is 3 inches. (G2407.6)
- Combustion air ducts cannot be screened when terminating in an attic space. (G2407.11 Item 5)
- When combustion air is obtained from the attic or crawl space, those spaces must be sufficiently vented. (G2407.6)
- In buildings of unusually tight construction, combustion air shall be obtained from outside the building. (G2407.1)
- For indoor combustion air openings, each opening shall be 1 square inch per 1,000 Btu/h input of all appliances, but not less than minimum of 100 square inches. Provide one opening at the top and one at the bottom. (G2407.5.3.1)
- Outdoor combustion air openings (attic and crawl) shall communicate directly or freely with the outdoors. (G2407.6.1)
- Where vertical ducts are used to provide combustion air from the outdoors, each opening requires 1 square inch of opening per 4,000 Btu/h of total input rating of all appliances in the space. (M1701.1)
- Where horizontal ducts are used, each opening requires 1 square inch of opening per 2,000 Btu/h of total input rating of all appliances in the space. (G2407.6.1)
- Outside combustion air openings are to be screened with corrosion-resistant mesh material not smaller than ¼-inch. (G2407.10)
- Combustion air may be drawn from inside the building if the conditioned space is at least 50 cubic feet per 1,000 Btu/h input for all fuel burning appliances combined. M1701.1, G2407.5.1)

## Vents and Connectors

- Venting systems shall be installed per the manufacturer's instructions. (M1801.1, G2427.6.1)
- Where two gas appliances are vented through a common vent connector, it is equal to the largest connector plus 50% of the smaller flue outlet and not less than the combined area of the flue outlets for which it acts as the common connector. (G2427.10.3.4)
- Vent connector clearances to combustibles are per the manufacturer's listing or performance standards. (M1803.3.4, M1306.1, G2427.7.8)
- Single wall vents cannot penetrate a wall, floor, or ceiling without a listed pass-through assembly, except for gas vents. (M1803.3.1, G2427.7.7)
- Vent terminations are installed per the manufacturer's listing. (G2427)
- Exhaust vent terminations for mechanical draft and direct venting shall not be less than 3 feet below or 3 feet horizontally from, or gravity air inlet into a building, nor less than 3 feet above any forced air intake within 10 feet, nor within 12 inches of grade. (M1804.2.6, Items 1,2, G2427.8)
- Power exhaust terminals shall not be located within 10 feet of property line and adjacent buildings, and 7 feet above any finished ground level public walkway. (M1804.2.6, G2427.3.3)
- Venting shall be supported per manufacturer's listing. (M1801.1)

## Clothes Dryer

- Exhausted per manufacturer's instructions. (M1502.1)
- Exhaust ducts shall be metal with smooth interior surfaces, with joints running in the direction of the airflow. (M1502.4)
- Protective nail plates are installed where nails or screws are likely to penetrate the duct, including at framing where there is less than 1 ¼ inches between the duct and framing. The nail plates shall extend 2 inches above the framing bottom plate and 2 inches below the framing top plate. (M1502.5)
- Duct connector shall be 4 inches diameter minimum or appliance outlet size. (M1502.4.1)
- The duct must run independently of other ducted systems and terminate outdoors. (M1502.2)
- The exterior termination is equipped with a backdraft damper with no screens, and 3 feet minimum away from any openings into the building. (M1502.3)
- Duct must be insulated to R-4 in unconditioned spaces.

## Range Hood

- The range hood shall terminate outside, be air-tight, be equipped with a backdraft damper, and shall be independent of all other exhaust systems. (M1503.1)
- Hoods with an exhaust rate over 400 CFM shall be mechanically or passively provided with make-up air. (M1503.6)

## Gas Fireplace

- The fireplace shall be installed per the manufacturer's instructions. (G2432.1)
- Shutoff valves for vented gas fireplaces shall be permitted to be installed in a remote area from the appliance and provided with ready access, permanent identification, and serve no other appliance. (G2420.5)

## Exhaust Venting

- Ventilation fans are required in kitchens, bathrooms, and water closet rooms. (M1505.4.4)
- Bathroom fans are 50 CFM minimum or 20 CFM (continuous). Kitchen fans are minimum 100 CFM or 30 CFM (continuous). (M1505.4.4)
- All exhaust ducts shall terminate outside the building, be equipped with backdraft dampers, and be insulated to a minimum of R-4 in unconditioned spaces such as attics or crawl spaces. (M1501.1)

## Air Conditioning

- The working space at the control side of the appliance shall be 30 inches deep and 30 inches wide. (M1305.1)
- The condensate line shall be a minimum ¾ inch pipe and sloped to the drain location without sags at a 1 percent slope. The line shall not empty into a public street. (M1411.3)
- Refrigerant lines shall be insulated to R-4. (M1411.6)
- Refrigerant circuit access ports shall be fitted with the locking-type tamper-resistant caps. (M1411.8)

## Whole House Ventilation

- Each dwelling unit shall be equipped with a ventilation system. The whole-house mechanical ventilation systems shall be designed in accordance with Sections M1505.4.1 through M1505.4.5. The whole-house ventilation system shall operate continuously. (M1505.4.3.2)

LEGAL DISCLAIMER: This should not be used as a substitute for codes and regulations. The customer is responsible for compliance with all code and rule requirements.