☐ **Whole-House Mechanical Ventilation.** Continuous whole-house mechanical ventilation required per IRC Table M1505.4.3(1), included below. Intermittent operation is permitted if the factor in Table M1505.4.3(2) (not shown) is used in sizing. Controls must provide ventilation in at least 25% of each 4-hour period. Mechanical ventilation fans must meet the efficacy requirements of Table R403.6.1 (not shown). Controls must allow manual override. Outdoor air intakes and exhausts must have automatic or gravity dampers. (R403.6)

Continuous Whole-House Mechanical Ventilation

Dwelling Unit Floor Area	Number of Bedrooms				
	0-1	2-3	4-5	6-7	>7
	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 - 3,000	45	60	75	90	105
3,001 - 4,500	60	75	90	105	120
4,501 - 6,000	75	90	105	120	135
6,001 - 7,500	90	105	120	135	150
>7,500	105	120	135	150	165

☐ **Local Exhaust Ventilation Required** (IRC M1505)

Area	Local Exhaust Rates in CFM
Kitchens	100 intermittent or 25 continuous
Bathrooms	50 intermittent or 20 continuous

☐ **Systems Serving Multiple Dwelling Units.** Mechanical Systems must comply with the C403 and C404 in lieu of the R403 residential provisions. (R403.7)

☐ **Equipment Sizing.** Heating and Cooling Equipment must be sized per ACCA Manual S based on loads calculated per ACCA Manual J. (R403.7)

☐ **Lighting.** At least 90% of permanently installed fixtures must have high-efficacy lamps (LED, CFL, T-8 lamps, and other lamps that meet the definition of high-efficacy). (R404.1)

References

RES*check*™ available at no cost from USDOE at
www.energycodes.gov/rescheck
Montana Department of Environmental Quality
deq.mt.gov/energy

MONTANA

Residential Energy Code

2018 International Energy Conservation Code

Prescriptive Requirements As Amended 2021

The energy code applies to residential buildings built in Montana. Cities, towns, and counties that choose to adopt the building code are required to enforce the energy code. Outside of these local code jurisdictions, builders are required to self-certify that the building complies with the energy code and must document energy code compliance through the self-certification process that requires the builder to provide a written statement to the homeowner stating the house complies with the energy code. The home builder may provide this certification by signing and dating the Energy Code Compliance Label developed by the Montana DEQ (deq.mt.gov/energy or 406-444-0281).

☐ **Log Home**s, if designed in accordance with ICC 400 meet energy code thermal envelope requirements.

☐ **Energy Efficiency Certificate**. Completed and permanently posted on electrical panel. (R401.3)

☐ **Prescriptive Envelope Requirements by Component.** (R402.1 and Table R402.1.2)

Component	Requirement
Windows and Doors	U-0.30
Skylights	U-0.55
Ceiling	R-49 or R-38 if full R-value extends over exterior wall top plate
Wood Frame Wall	R-21 Cav or R-13 Cav + R-5 CI
Mass Wall	R-15 or R-20 (if more than 50% of R-value on wall interior
Floor	R-30
Basement Wall	R-19 Cav or R-15 CI
Slab (Unheated)	R-10 for 4' vert. and/or horiz.
Heated Slab-on-Grade	R-5 under slab + R-10 edge
Crawl Space	R-19 Cav or R-15 CI
Cav - Cavity Insulation	CI - Continuous Insulation

The U-Factor Alternative and UA Trade-off (REScheck^{TM}) are alternative thermal envelope compliance paths.

☐ **U-Factor Labels.** Windows, doors, and skylights lacking NFRC label are assumed to have the U-factor per Table R303.1.3(1) and Table R303.1.3(2). (R303.1.3)

☐ **Eave Baffles.** Required for attic venting at eaves if air-permeable insulation is installed in attic. (R402.2.3)

☐ **Envelope Air Leakage**

- **Air Barrier Installation.** Per Table R402.4.1.1, an air barrier must be installed on the warm side of the exterior assembly.
- **Building Envelope Tightness (Blower Door) Test.** ≤4 ACH tested at 50 Pascals. (R402.4 as amended)

☐ **Fireplaces.** Gasketed doors, tight-fitting dampers, and outdoor combustion air required. (R402.4.2)

☐ **Rooms Containing Fuel-Burning Appliances.** Atmospherically vented combustion appliances (i.e., gas water heaters, furnaces, boilers) must be enclosed in a sealed room with ceilings, walls, and floors insulated at least to basement wall levels. The door must be gasketed. Hot-water lines and ducts must be insulated per R403. (R402.4.4)

☐ **Controls.** At least one thermostat for each separate heating and cooling system. Primary system must be controlled by programmable thermostat. (R403.1)

☐ **Duct Insulation.** Supply and return ducts in the attic must be a minimum of R-8 if ≥ 3" diameter and R-6 (if < 3" diameter). Supply and return ducts elsewhere outside the thermal envelope must be a minimum of R-6 (if ≥ 3" diameter) and R-4.2 (if < 3" diameter). (R403.3.1)

☐ **Duct Sealing.** Ducts, air handlers, and filter boxes sealed per IRC or IMC. (R403.3.2)

☐ **Duct Tightness Testing.** Not required if all ducts and air handlers are located entirely within the thermal envelope. Total Leakage Test must be ≤ 4 CFM/100 ft^2 of conditioned floor area tested at 25 Pascals or ≤ 3 CFM/100 ft^2 tested at rough-in without air handler. (R403.3.3)

☐ **Building Cavities as Ducts.** Framing cavities may not be used as supply ducts but may be used as return ducts if there is no atmospherically vented appliance located outside a sealed and insulated room complying with R402.4.4 and if tested total duct system leakage is no greater than 4 cfm/ft^2. (R403.3.5 as amended)

☐ **Hot Water Pipe Insulation.** ≥ R-3 required if piping is ≥ 3/4" nominal diameter, serving more than one dwelling unit, located outside, under floor slab, buried, serving distribution manifold, recirc. systems. (R403.5.3)