

## Preparation

- Before air sealing attics and crawlspaces, ensure no leaks or water intrusion exists prior to installing insulation.
- Verify attic and crawlspace each meet local and state codes for ventilation, typically 1/150 or 1/300 if the vents are well distributed between high and low on the roof, or distributed evenly around the crawl perimeter.
- Ensure home is free of existing moisture, mold and relative humidity issues.
- Ensure home has at least one operational exhaust fan, ducted to the exterior, per the guide "Complementary Prep Work: Mechanical Ventilation Guide — Venting Bath Fans and Dryers."
- If combustion appliances are present, ensure the presence of or install a UL- or CUL-approved carbon monoxide detector.
- Confirm use of correct materials identified for air sealing structural leaks vs air leaks around high-temperature items such as flues, chimneys and recessed-can lights.
- Identify inaccessible locations.
  - Building structure, framing and mechanically fastened materials block access.
  - Opportunities immediately adjacent to eave line: top plates, balloon framed walls, soffits and can lights.
  - Penetrations beneath/behind 5 inches of insulation, i.e. blown in attic and batt in floor.

## SPECIFICATION CHECKLIST

For details on all BPA requirements for this measure, please refer to the [BPA Residential Weatherization Specifications and Best Practices Guide](#).

- Attic hatch/door and pull-down stair covers: gasket or weather-stripping. Vertical and horizontal hatches, or pull-down stairs between conditioned space and attic or crawlspace. Must provide an effective air seal and be durably installed to the use-case of the hatch.
- Duct boots/penetrations: mastic, caulk, or other airtight seal installed around the perimeter of duct boots between the boot and the ceiling.
- Chases, soffits and fl or joists under knee walls: blocked with rigid material and sealed with caulk or foam. Maintain clearance from combustible materials, typically 3 to 4 inches, but check local codes.
- Fire-rated materials used as appropriate near heat-producing devices.
- Recessed-cans/Non-IC rated fixtures: foam, caulk or another airtight seal installed between fixture and ceiling; or a drywall or another non-flammable air-sealed insulation box or hat installed over fixture. Shield extended 3 to 4 inches above new attic insulation. No insulation covers the top of the box or hat fixture.
- Recessed-cans/IC-rated fixtures: fixture sealed between interior finish and the fixture. Fixture is not covered with spray foam and openings in the fixture are not sealed. Attic insulation is installed over the fixture.
- Bath fans: foam, caulk, or other airtight seal installed around perimeter of bath fans. Fire-resistant caulk used for bath fans with a heat source. Gaps larger than 1 inch spanned with sheet metal.
- Top plates and electrical or plumbing penetrations, sill plates for basement wall rim joists: drywall-to-top-plate connections, wood-to-wood or concrete seams, penetrations through the plate sealed with foam or caulk.

## Installation Examples



**SEALED CHASE OR CAVITY**

*Courtesy of Oregon Housing and Community Services*



**OPEN/UNSEALED CHASE OR CAVITY**

*Courtesy of Oregon Housing and Community Services and Oregon Energy Coordinators Association*



**NON-IC FIXTURE WITH DRYWALL SHIELD (HAT)**

*Courtesy of Advanced Energy*



**UNSEALED NON-IC FIXTURE**

*Courtesy of Advanced Energy*



**SEALED PENETRATION (HEAT-PRODUCING)**

- Surrounded by sheet metal.
- 3-inch clearance maintained.
- Fire-resistant sealant.

*Courtesy of Advanced Energy*



**UNSEALED PENETRATION (HEAT-PRODUCING)**

*Courtesy of U.S. Department of Energy Weatherization Program Trainers' Consortium (DOE WAP TC)*



**FLOOR JOISTS UNDER KNEEWALL**

(blocked with rigid material and sealed with caulk).  
*Courtesy of U.S. Department of Energy*



**FLOOR JOISTS UNDER KNEEWALL**

(Not blocked with rigid material and unsealed).  
*Courtesy of U.S. Department of Energy*

## MINIMUM REQUIRED DOCUMENTATION

Contact the serving [utility](#) for specifics on required documentation.

- Square footage of sealed area and age of home.
- Contractor invoice showing order or purchase date and cost.
- Documentation that the measure requirements have been met (e.g., manufacturer, model number, type, size and quantity of product installed or used).

## PAIRS WELL WITH

- Home Insulation.
- Prescriptive Duct Sealing.