

## AIR LEAKS

Some amount of outside air is necessary to keep the indoor air quality at safe levels. However , controlling the amount and way in which air enters is important to maintain occupant comfort level.

### ADVANTAGES

- Heating and cooling systems run most efficiently and save money and energy

### HOW TO CHECK FOR AIR LEAKS

#### Basic building pressurization test

To do a building pressurization test, you will need to depressurize the building as much as possible and then check for leaks.

#### To depressurize the building (to increase infiltration through cracks and leaks for easy detection):

**Step 1:** Close all the exterior doors, windows and fireplace flues

**Step 2:** Turn off all combustion appliances ( gas burning furnaces and water heaters)

**Step 3:** Turn on all the exhaust fans or use a large window fan to remove the air from the rooms

#### To check for leaks:



Use an incense stick or a lit candle. The air from the leaks causes the smoke or candle flame to waver, indicating the leak. When you find a leak, mark with a piece of chalk or light pencil mark.

#### Where to check for leaks:

- **Indoor**
  - Gaps between the baseboard and flooring
  - Gaps at the junction of the wall and ceiling
  - Electrical Outlets
  - Switch plates
  - Baseboards
  - Attic Hatches
  - Wall or window-mounted air conditioners
  - Anywhere that there is a pipe or wire coming in – like plumbing, cable or electric wires
- **Doors and Windows**
  - Rattle test : If doors and windows rattle, it means that there is space around them for air leaks.

Paper test: Shut the door or window on a paper. If it slides out easily without tearing, there is a leak.

Weather stripping and caulk test: Improperly laid, worn out and misaligned caulk and weather stripping aids leaks.

- **Outdoor**

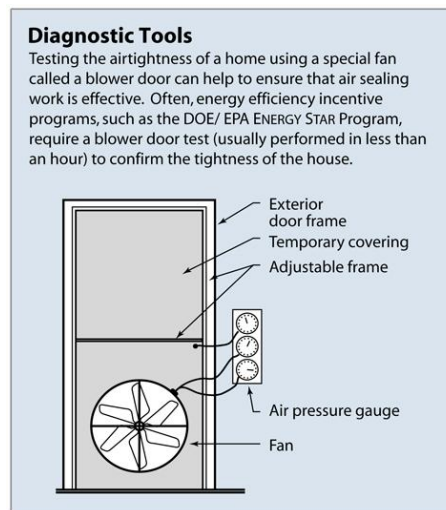
Where two materials meet : ex: wood siding meets stucco

Between the foundation and ground floor slab, or any structural intersections

Other ways of checking for leaks:

### Blower Door Test :

All the air is sucked out of the house using a blower door apparatus, and professional energy auditors go around the house with a smoke torch to determine leaks.



The blower door test is included in some home energy audits. Sign up for a No Cost Energy Audit through CEA's website [here](#).

### Thermal Detector:

This instrument detects temperature changes. It has a light that turns blue on detecting cooler air or red on detecting warmer air.

### HOW TO SEAL AIR LEAKS

Once the source of air leaks are determined, they can be sealed by

- [Caulking](#)
- [Weatherstripping](#)
- Increasing or correct installation of [insulation](#)

Source : [www.energysavers.gov](http://www.energysavers.gov)