

Minimum Combustion Air Requirements (CAR)

Requires at least 50 cubic feet of **CAZ*** volume per 1,000 BTUH for all combustion appliances: **50/1,000 = 0.05, or 5%**

Formula: Total Input BTUH x 0.05 = Min CAZ size (cubic ft)

Practice Math: CAZ in a Basement

Step 1: Add input BTUH for all appliances in the CAZ

Furnace	<u>100,000</u>
DHW	<u>30,000</u>
Dryer	<u>+ 20,000</u>

Total Input BTUH = _____

Step 2:

Multiply Total BTUH by 0.05 = _____ **cubic ft**

Minimum volume of CAZ to meet code for combustion air supply

Step 3:

Volume of CAZ: 25' x 40' x 8' = _____ **cubic ft**

Is the CAZ large enough?

Is Step 3 ≥ Step 2?

If Yes = meets code

If No = take action to ensure enough combustion air

* CAZ = Combustion Appliance Zone (the room or enclosed space)

Example 1: GJA Test House

Formula: Total Input BTUH x 0.05 = Min CAZ size (cubic ft)

Step 1: Add input BTUH for all appliances in the CAZ

Furnace _____
DHW _____
Dryer _____
Other + _____

Total Input BTUH = _____

Step 2: **BTUH x 0.05 or 5% = _____ CODE cubic ft**
Minimum volume of CAZ to meet code

Step 3:

CAZ room volume: L x W x H = _____ CAZ cubic ft

Is CAZ ≥ CODE?

If Yes = meets code

If No = take action to ensure enough combustion air

Example 2: Your House

Formula: Total Input BTUH x 0.05 = Min CAZ size (cubic ft)

Step 1: Add input BTUH for all appliances in the CAZ

Furnace _____
DHW _____
Dryer _____
Other + _____

Total Input BTUH = _____

Step 2: **BTUH x 0.05 or 5% = _____ CODE cubic ft**
Minimum volume of CAZ to meet code

Step 3:

CAZ room volume: L x W x H = _____ CAZ cubic ft

Is CAZ ≥ CODE?

If Yes = meets code

If No = take action to ensure enough combustion air