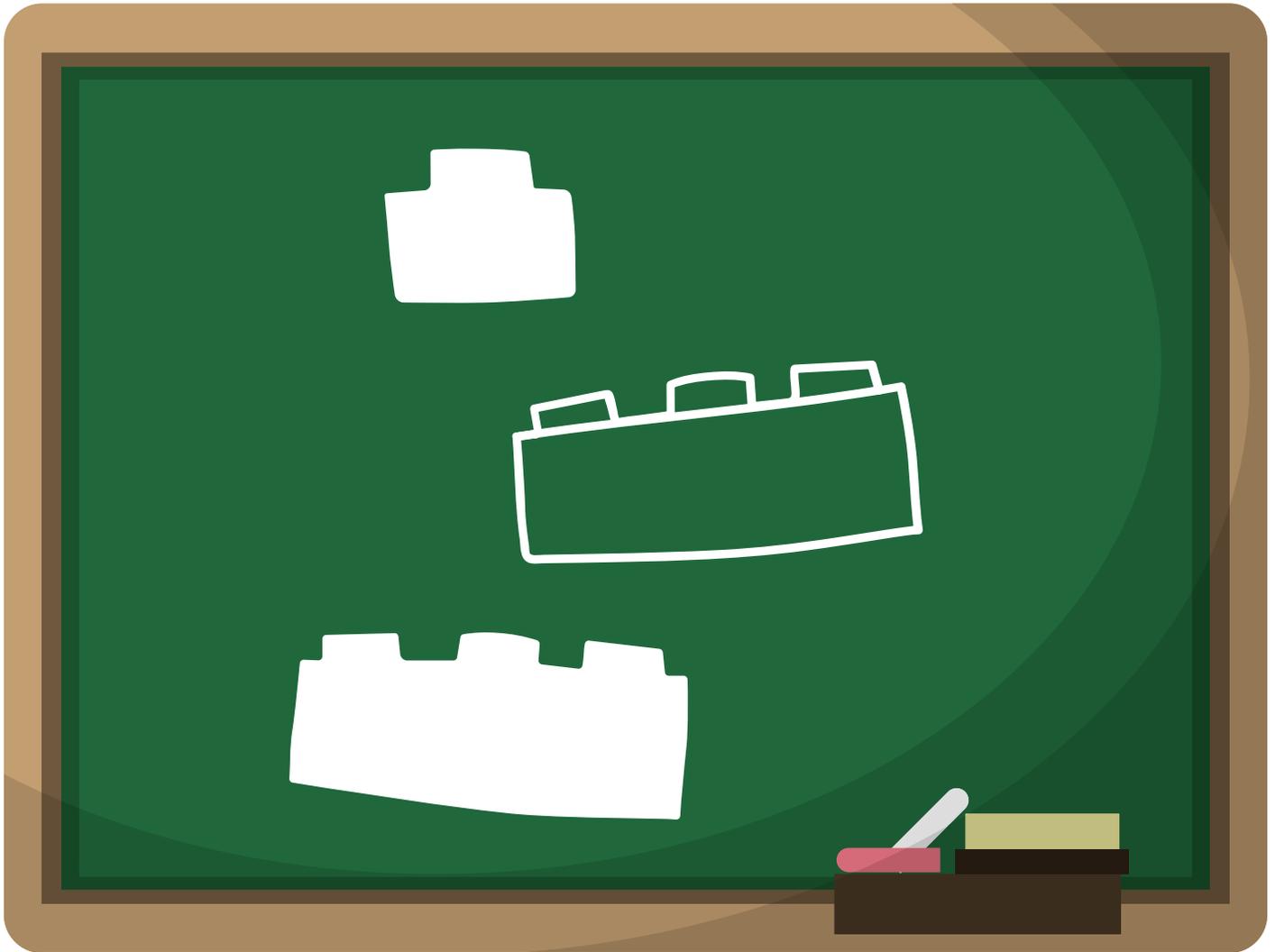


# Guide to Components



**This guide is used to help identify and understand different components on ComfortBilt stoves.**

*\*Whenever performing maintenance on your stove, ensure that the stove is cool, and that power has been disconnected.*

## Air Damper



### Location:

: The Air Damper system is located on the right side of the stove (as you are facing the front), where the air intake pipe abuts against the back of the firewall.



### Function:

The purpose of this guillotine slider is to allow more or less air through the air intake system. As the lever is pushed in, this restricts the airflow somewhat and creates more air pressure behind the restrictor. As the lever is pulled out, this allows more air to flow through unrestricted, but will lower the air pressure coming in to the stove.

## Heat Tube Carbon Scraper



### Location:

The Carbon Scraper is located on the front of the stove near the top on all models. (Round metal knob attached to a rod)

*\*Never touch this lever while the stove is hot as this could lead to serious burns*



### Function:

The purpose of this component is to scrape the carbon buildup that can accumulate on the heat-transfer tubes. By doing this regularly, you decrease the insulating effect of the carbon, and increase the efficiency and heat output of the stove

## Glass Air Wash System



### Location:

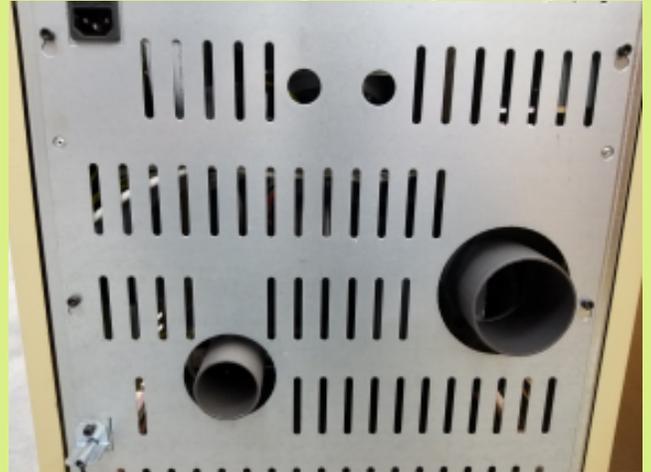
The Glass Airwash system is located below the front window. On some models it is hidden by the door. (On all models, right is open and left is closed)



### Function:

The purpose of this system is to allow the stove to draw in air, through the lined up slots, to gently wash against the interior of the glass to help keep it free of soot buildup.

## Air Intake (Air Ingress) and Exhaust (Air Egress)



### Location:

The location of the Air Intake pipe is located on the back right of the stove, and the Exhaust pipe is located on the back left. (As you are facing the front)



### Function:

The purpose of both the air intake and exhaust is to provide an in and out flow of air for the stove's combustion. The air intake is a standard 2" pipe, while the exhaust is standard 3".

## Room Blower Fan Assembly



### Location:

The Room Blower fan is located in the central area of the stove, mounted at the bottom, directly below the burn box/firewall.



### Function:

The purpose of this fan is to draw air in from the back of the stove, and force it upward through the heat transfer tubes and into the room. This fan is what blows heated air into the room from the top front area of the stove.

## Exhaust Motor/Fan Assembly



### Location:

The Exhaust motor assembly is located on the left side of the stove (when facing the front)



### Function:

The purpose of the exhaust motor fan is to provide the necessary airflow through the stove for proper combustion. As the exhaust fan expels the hot gasses, this creates a negative pressure within the fire chamber/burn pot area of the stove. This negative pressure causes fresh air from the intake to rush in and replace this void, thus creating a total air circuit.

## Temperature Sensing Wire



## Controller Ribbon Cable



### Location:

The temperature sensing wire (or temp wire) is typically mounted to the back right section of the stove (when facing the front)



### Function:

The purpose of this wire is to sense the temperature of the ambient air around it. (This may differ from the temperature that is felt in other parts of the room) When in temperature mode, this wire provides the data for the “current temp” and the stove will adjust to try to match this temperature to the “desired temp” by raising or lowering the current heat level setting. (The stove does not shut down when desired temp is reached. It will default to heat level 1 and maintain a slow, steady fire)



### Location:

The Controller Ribbon Cable is tucked behind the dust shield plate on the back of the stove, just above the power switch.



### Function:

The purpose of this cable, is to connect the top-side control panel to the bottom mounted motherboard. Input data is sent from the controller to the motherboard by way of this data cable.

## Motherboard



### Location:

The Motherboard is located in the central portion of the stove, usually mounted to a floor bracket.



### Function:

The motherboard is the main circuit board that all other components are connected to. It provides the electrical pathways for the control panel, switches, sensors, and other active components.

## Motherboard Connections



### Connections:

1. Black 20 pin - Connector for gray data line going to top control panel.
2. Red 2 pin - Connector for NTC1 Proof of fire switch
3. Yellow 2 Pin - NTC2 Overheat sensor
4. White 2 Pin - Thermostat temperature sensing wire
5. Blue 2 Pin - Limit/Hopper Lid Switch
6. Black 2 Pin - Vacuum Switch Starting at the top right and going down the right side:
7. Blue soft cover - 10A motherboard fuse
8. White 14 Pin - Main power harness connector