The wood gas must be evenly spread across the mixing array to avoid over or under loading any part. There is a limit to how much wood gas can be mixed with this arrangement. Below this limit the emissions are very clean.

Wood gas rises by the draft and encounters the tubes. The tubes produce a constriction in the stove. As the gas passes between the tubes, two things happen: it accelerates, and it is divided into thin sheets. Keeping with the Venturi effect, the pressure of the gas is reduced as it accelerates. The atmosphere pushes air into the ends of the pipes, out of the slots, and into the wood gas to equalize the pressure. The air is fed from both sides into the thin sheets of gas, and so must penetrate only half the thickness of the sheet. This combination provides quick and thorough mixing. The flame takes more time to burn, but the mixing is accomplished within the layer of the tubes. The total open area between the tubes should not be less than half the cross sectional area of the reactor chamber to avoid excess resistance.

Though the mixing is complete, the chemical reactions in the flame, especially burning the solid carbon soot, take some time to finish. The fan spins the flame causing it to rise at an angle, giving it more dwell time in the heat of the combustor to finish burning.

End view of tubes with slits.