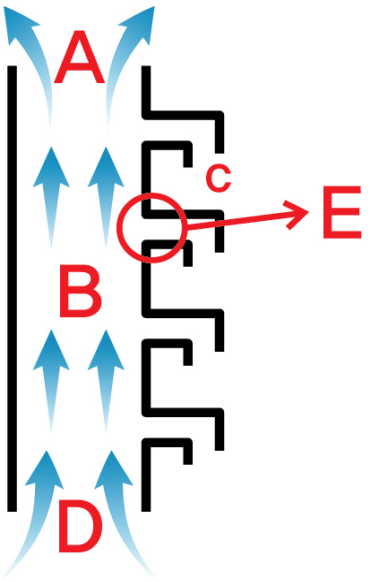
Explanation of Natural Inflow-Centered Chimney Structure



A. Upper Chimney Outlet
The point where air drawn from indoors is naturally discharged to the outside through the top of the chimney. This exhaust is driven by pressure difference and thermal buoyancy, not by a fan.

B. Internal Updraft Flow Path
Air naturally rises through this vertical channel, forming a continuous upward flow starting from the lower inlet (D).

C. Lateral Inlet Connection for Each Household
The indoor air (E) is drawn into the chimney flow (B) through this lateral junction. This is a passive suction point induced by internal pressure differences.

D. Lower Inlet (Bottom Air Source)
Outside air is naturally drawn into the chimney from the base. This inlet is essential to maintaining the upward airflow inside the chimney structure.

E. Indoor Polluted Air Flow
Polluted or odorous indoor air, such as from kitchens, is guided into the chimney via point C and discharged via A. The entire process operates without a fan, relying on pressure-induced airflow.

Summary:
This design demonstrates a natural inflow-centered structure where suction does not begin at the fan but is instead induced by vertical airflow and structural pressure differences. This principle aligns with the SIIEM model and represents a shift away from traditional forced-exhaust systems.