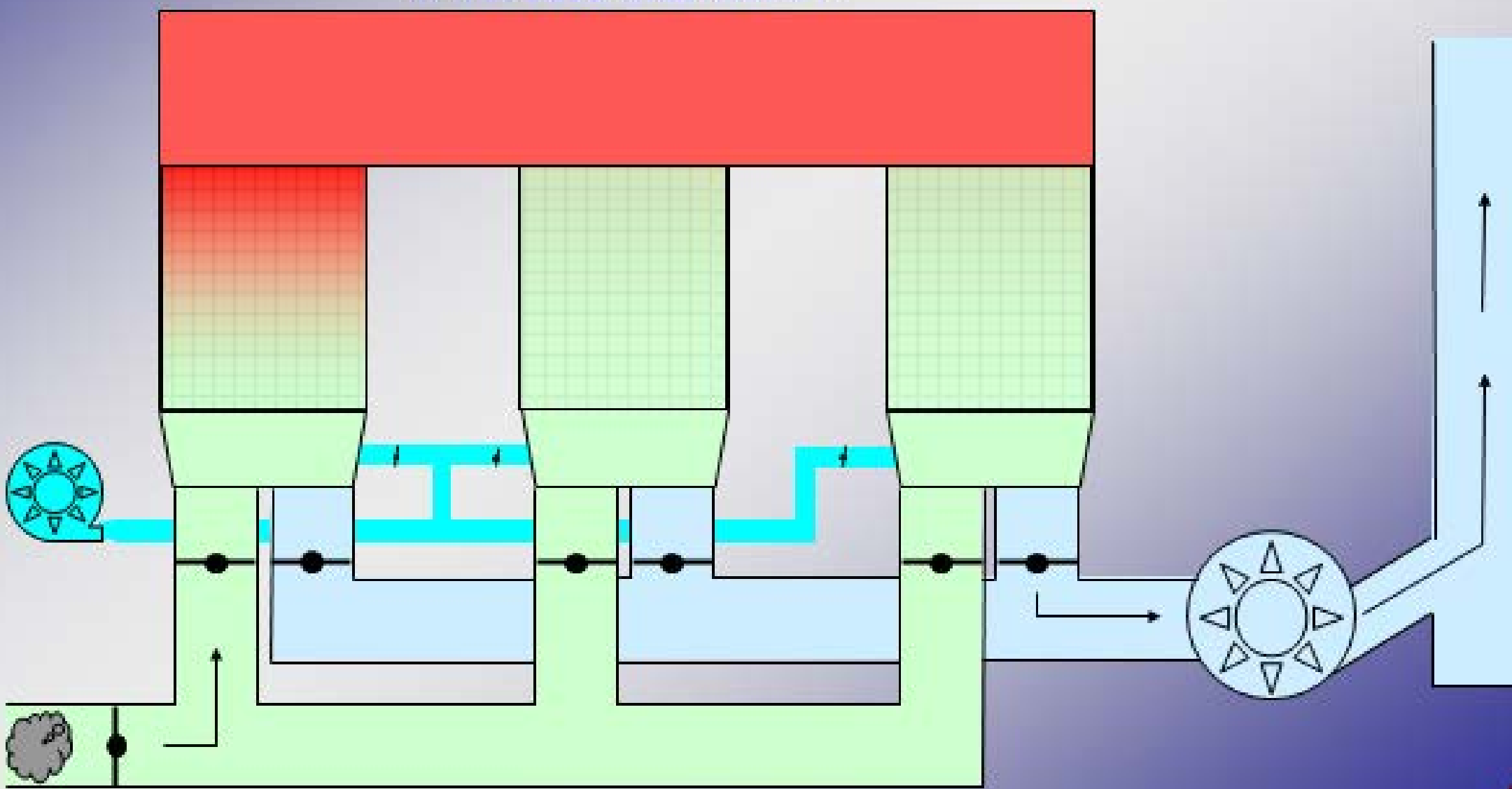


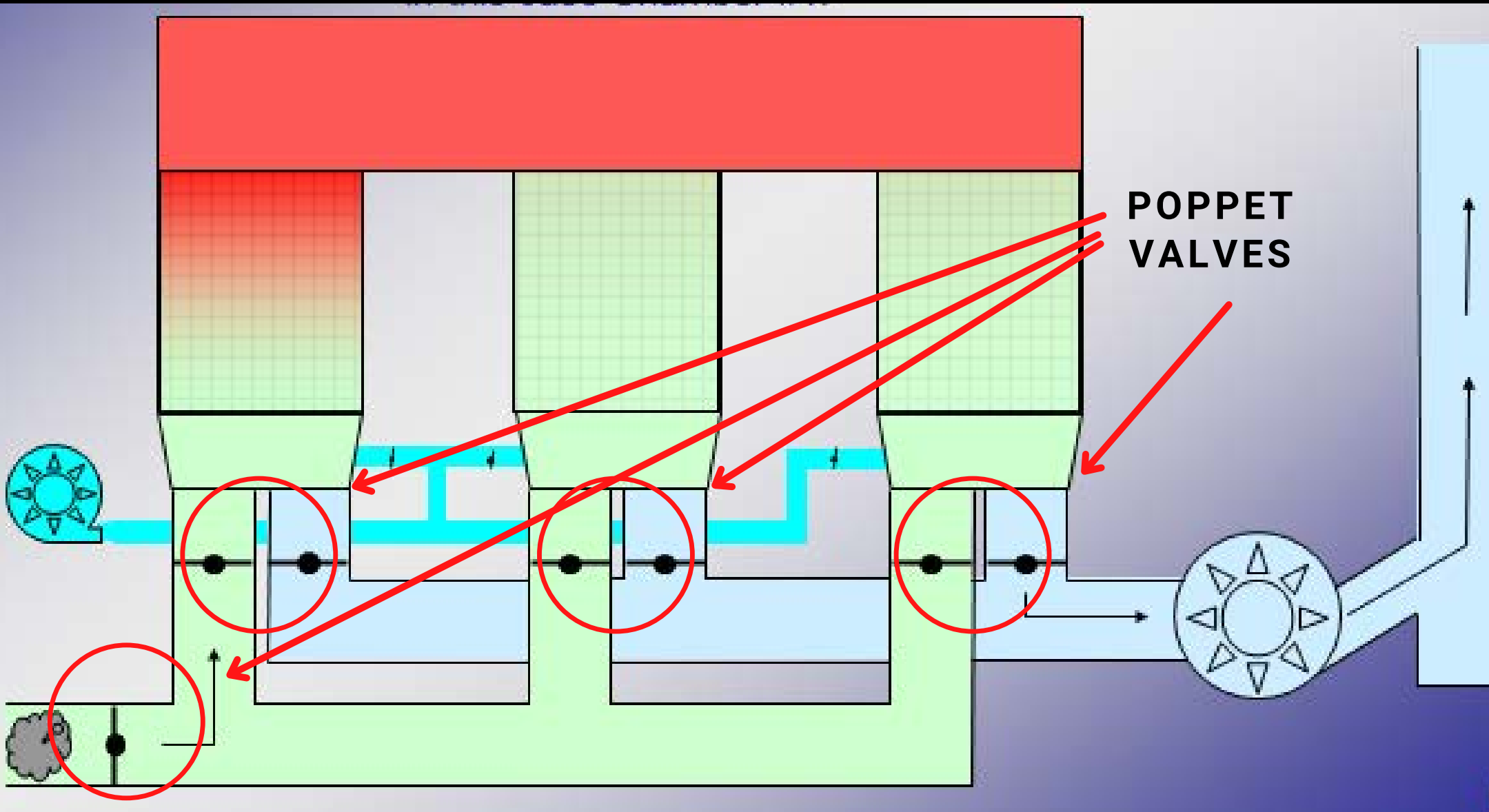
MULTI-CHAMBER

Regenerative Thermal Oxidizer



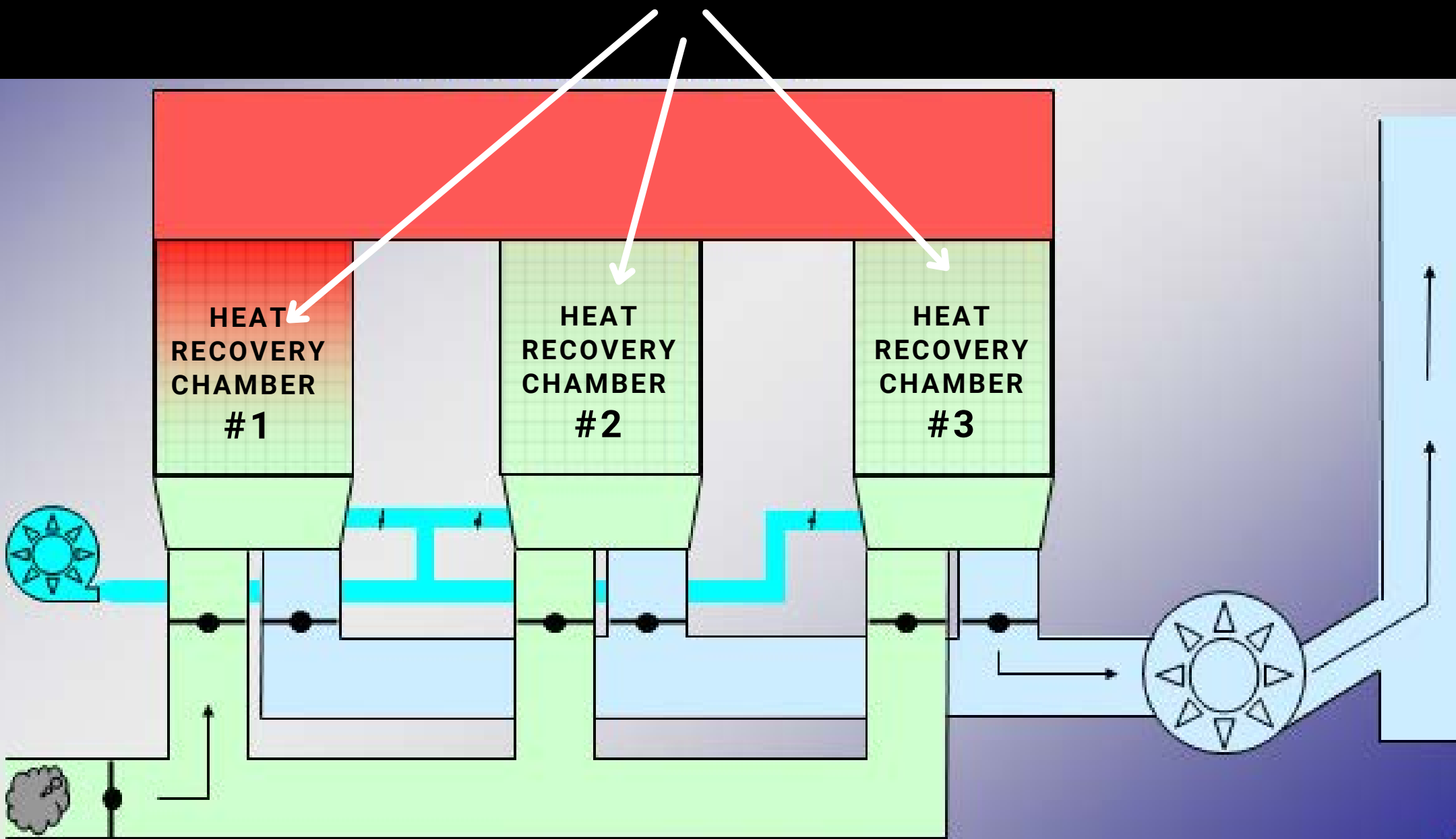
POPPET VALVES

Send air flow through RTO



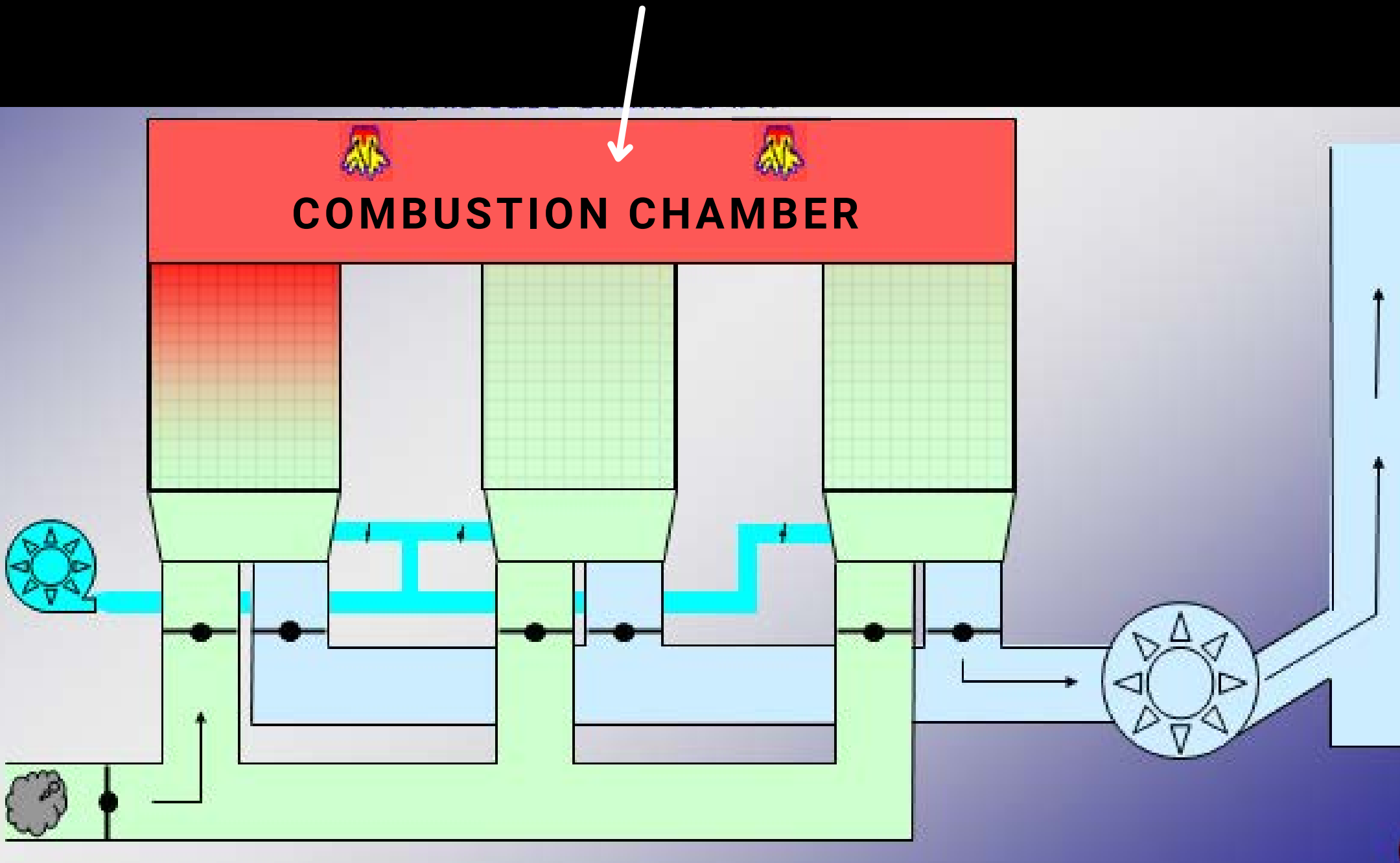
RECOVERY CHAMBERS

Filled with Ceramic Media



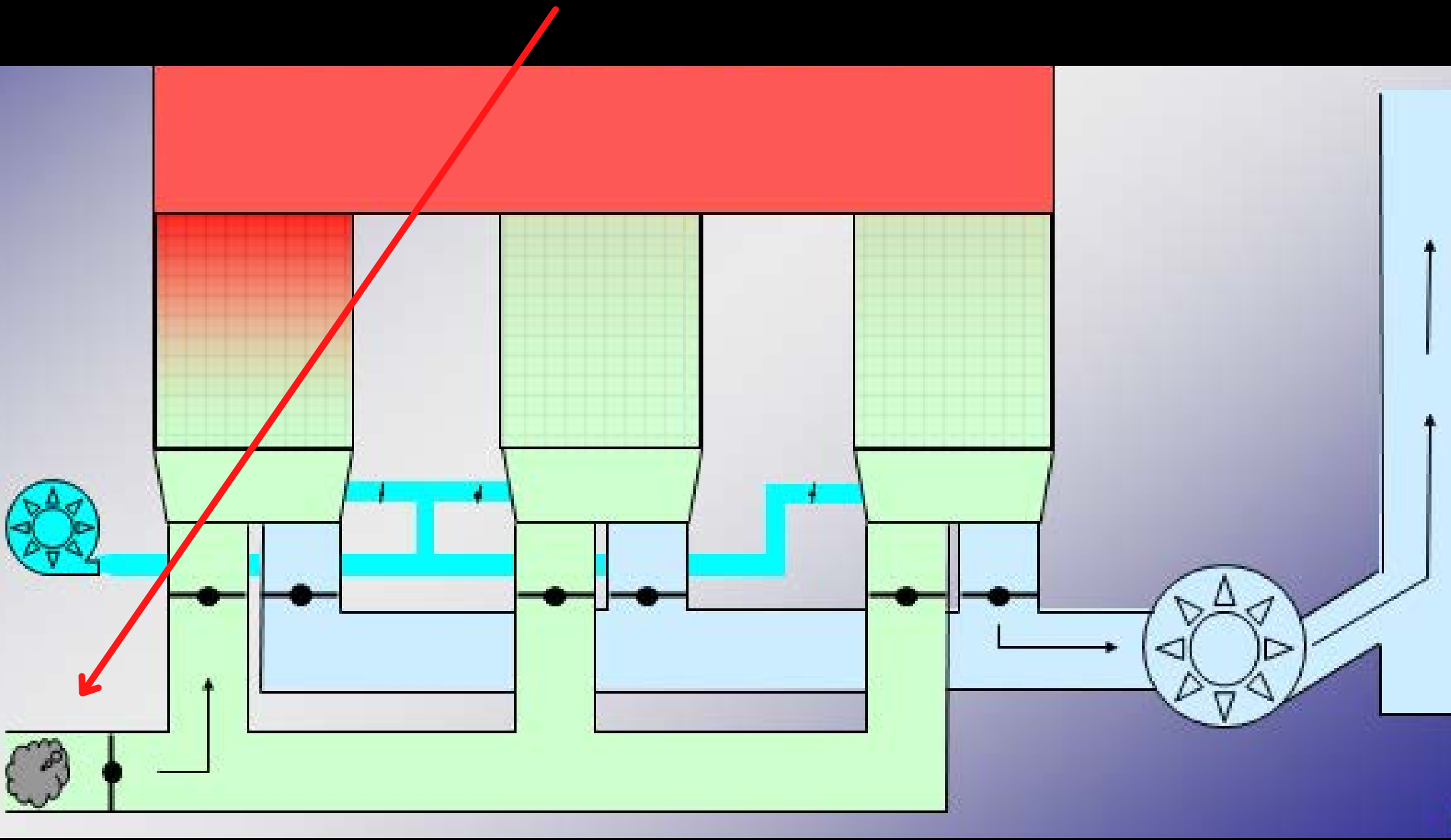
COMBUSTION CHAMBER

With Natural Gas Burners



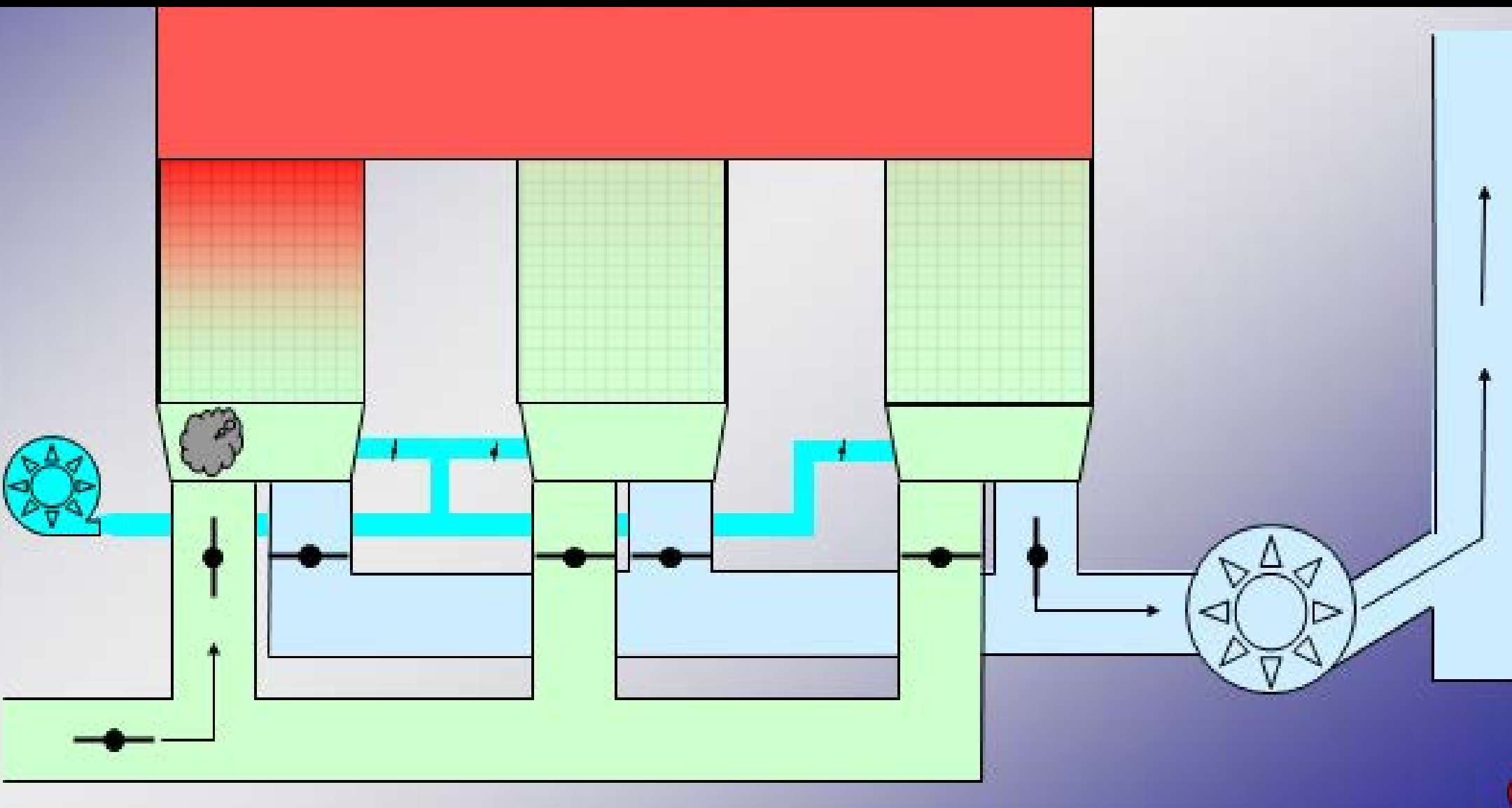
STEP 1:

Contaminated air enters RTO inlet through manifold duct. Inlet valve directs air into Recovery Chamber.



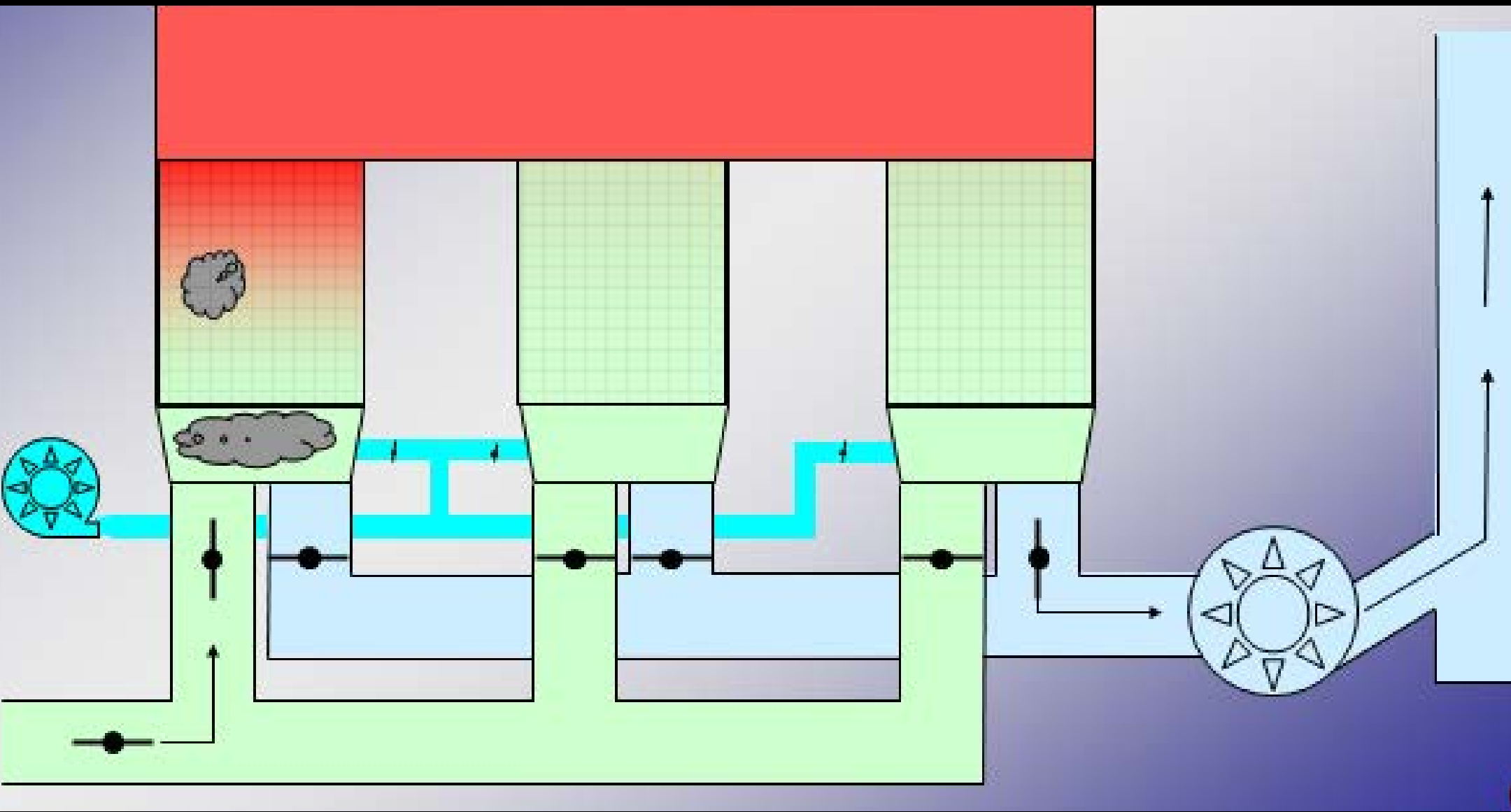
STEP 2:

Air passes through Recovery Chamber



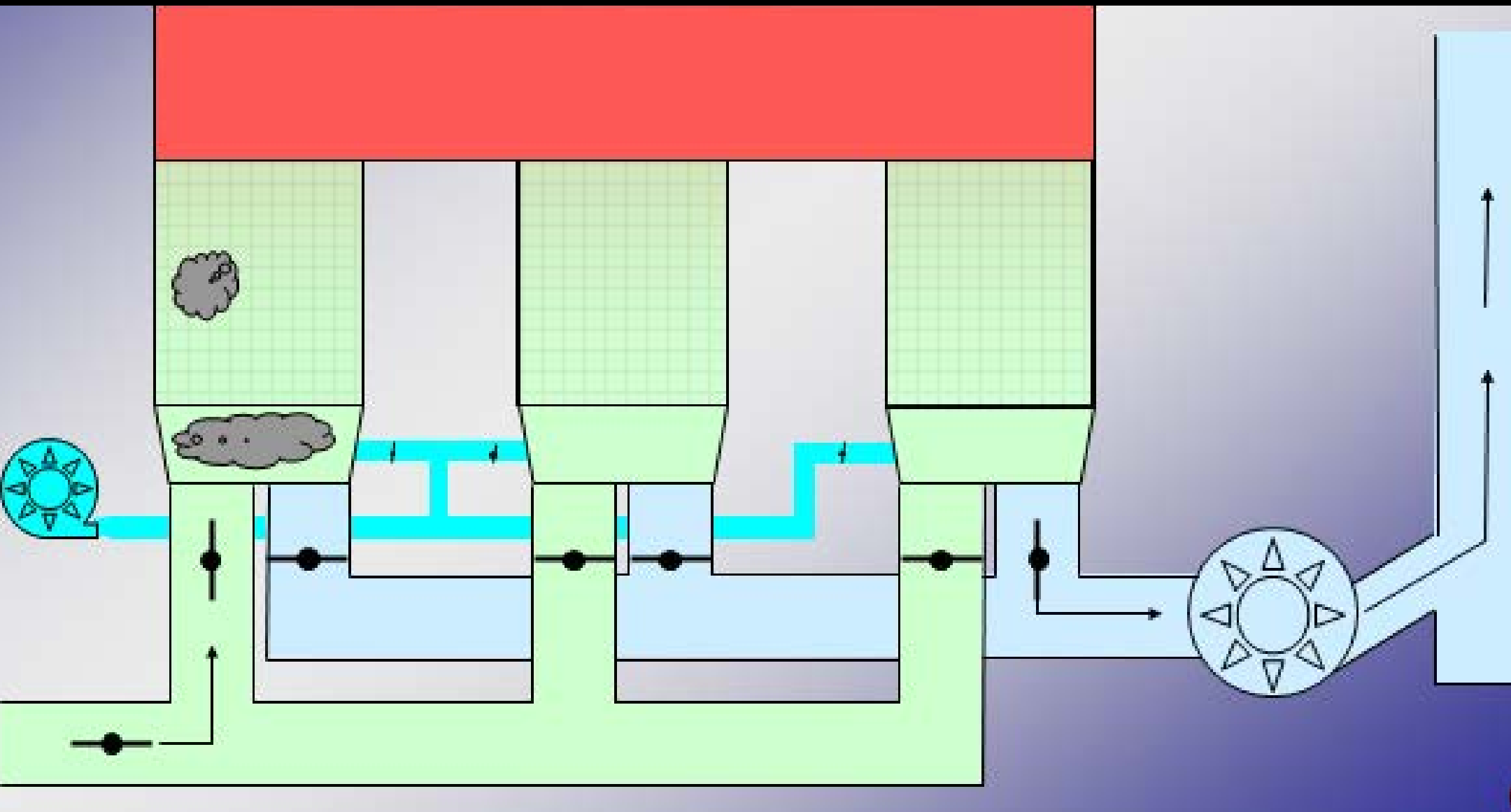
STEP 3:

A small amount of untreated gas (the "puff") collects in void below media bed



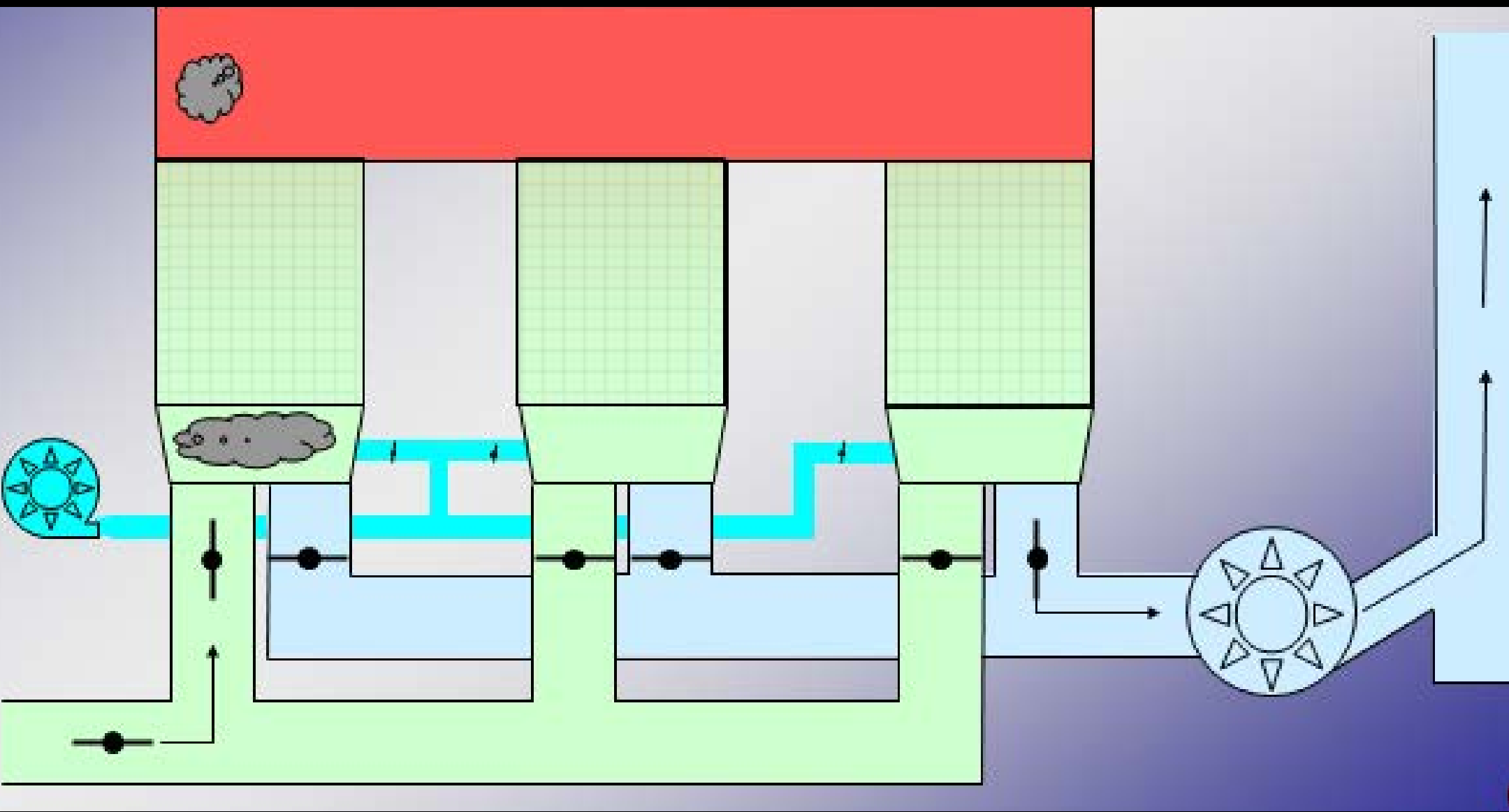
STEP 4:

Air absorbs heat from ceramic media
(collected from previous cycle)



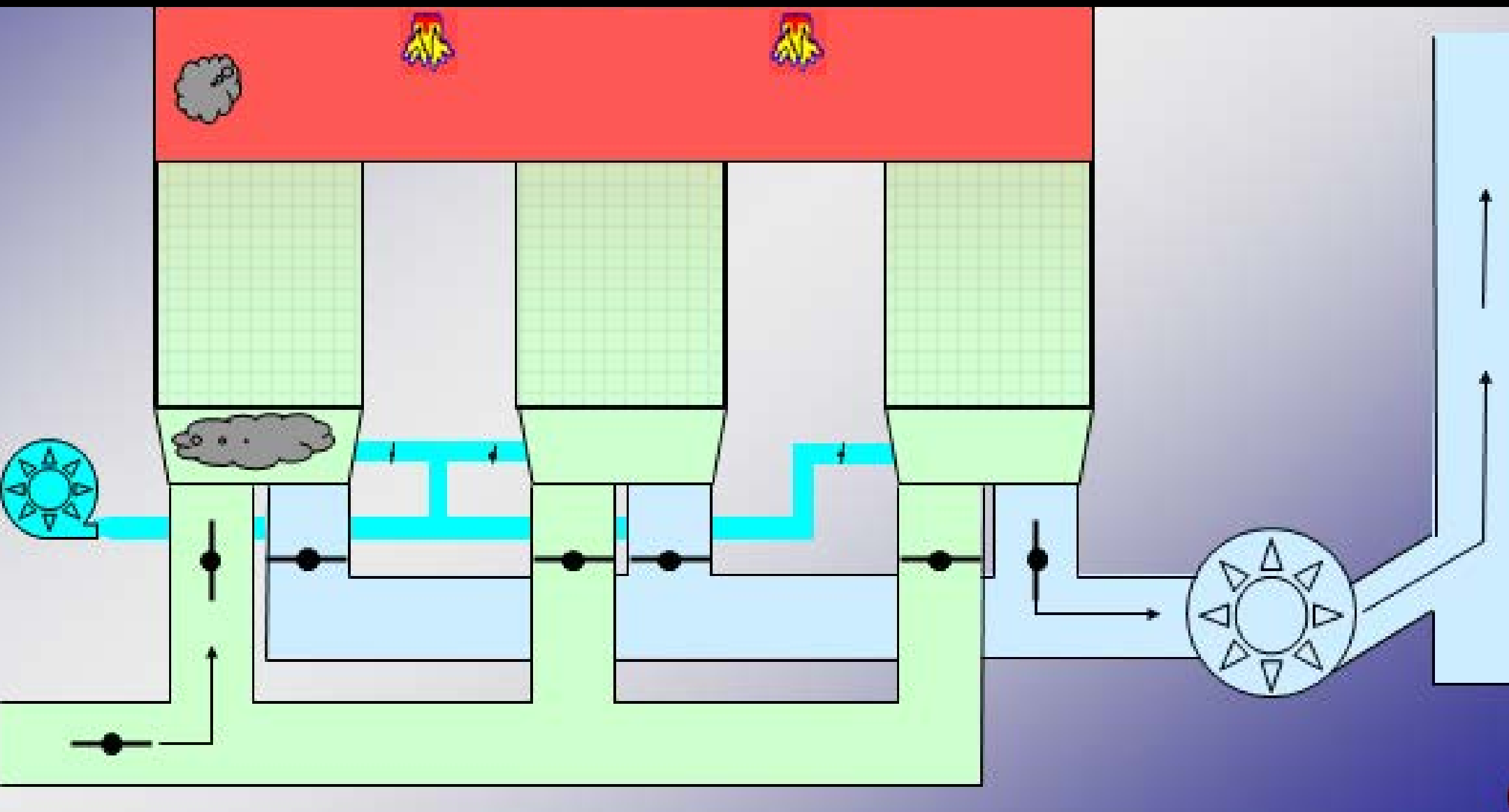
STEP 5:

Air stream increases in temperature until it enters Combustion Chamber



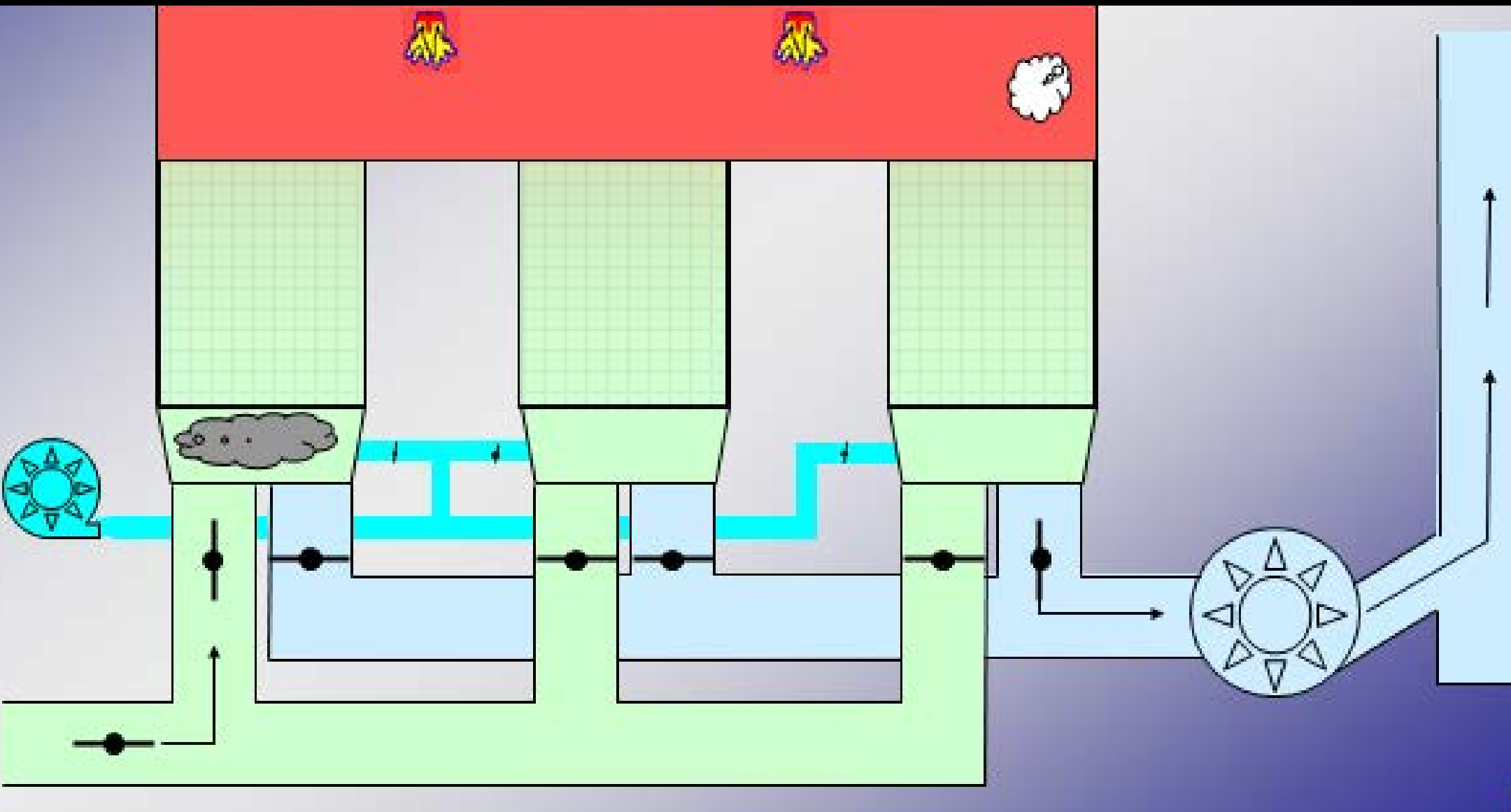
STEP 6:

Burners in Combustion Chamber add enough thermal energy to oxidize contaminants



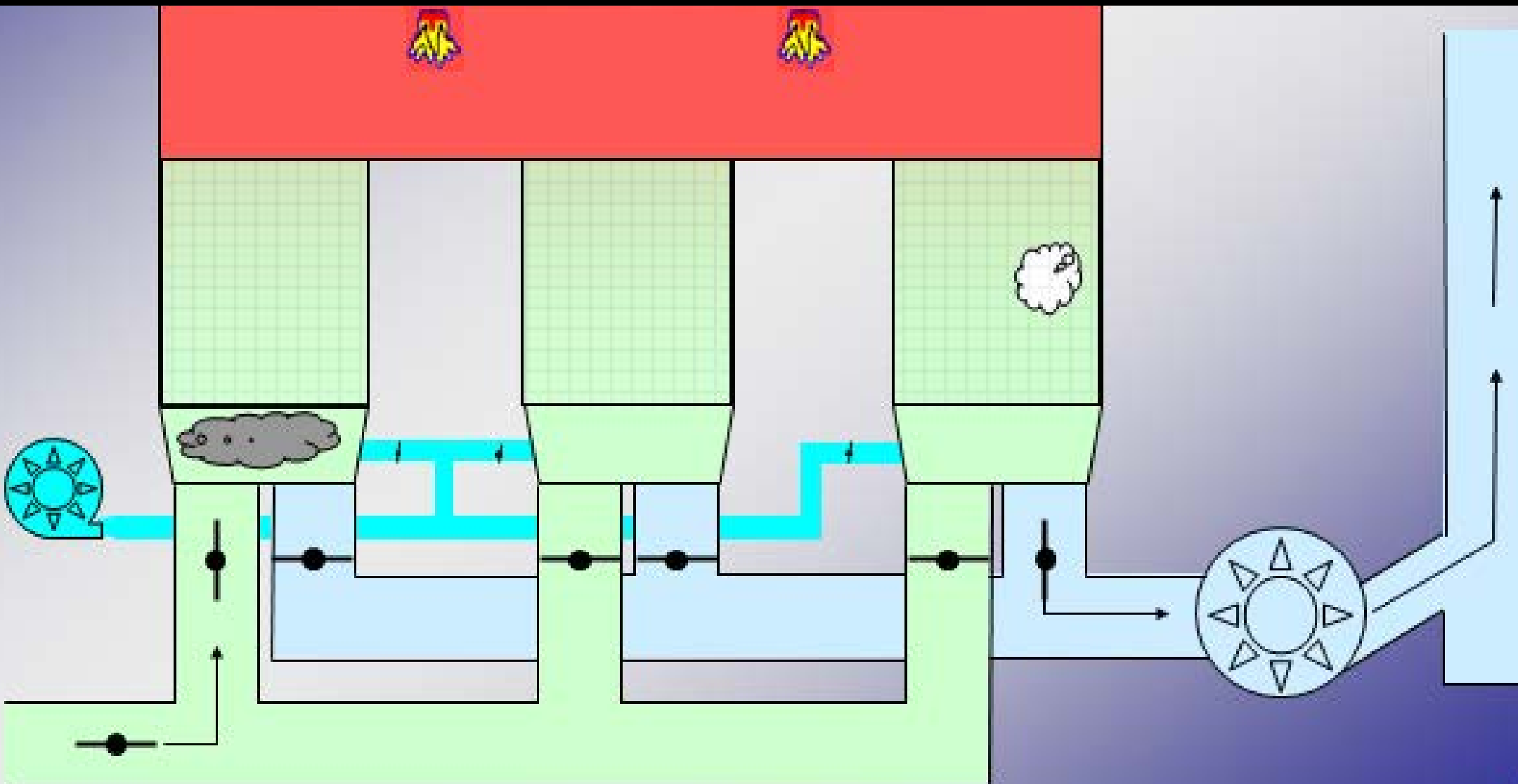
STEP 7:

Clean air passes through the Recovery Chamber currently in exhaust mode



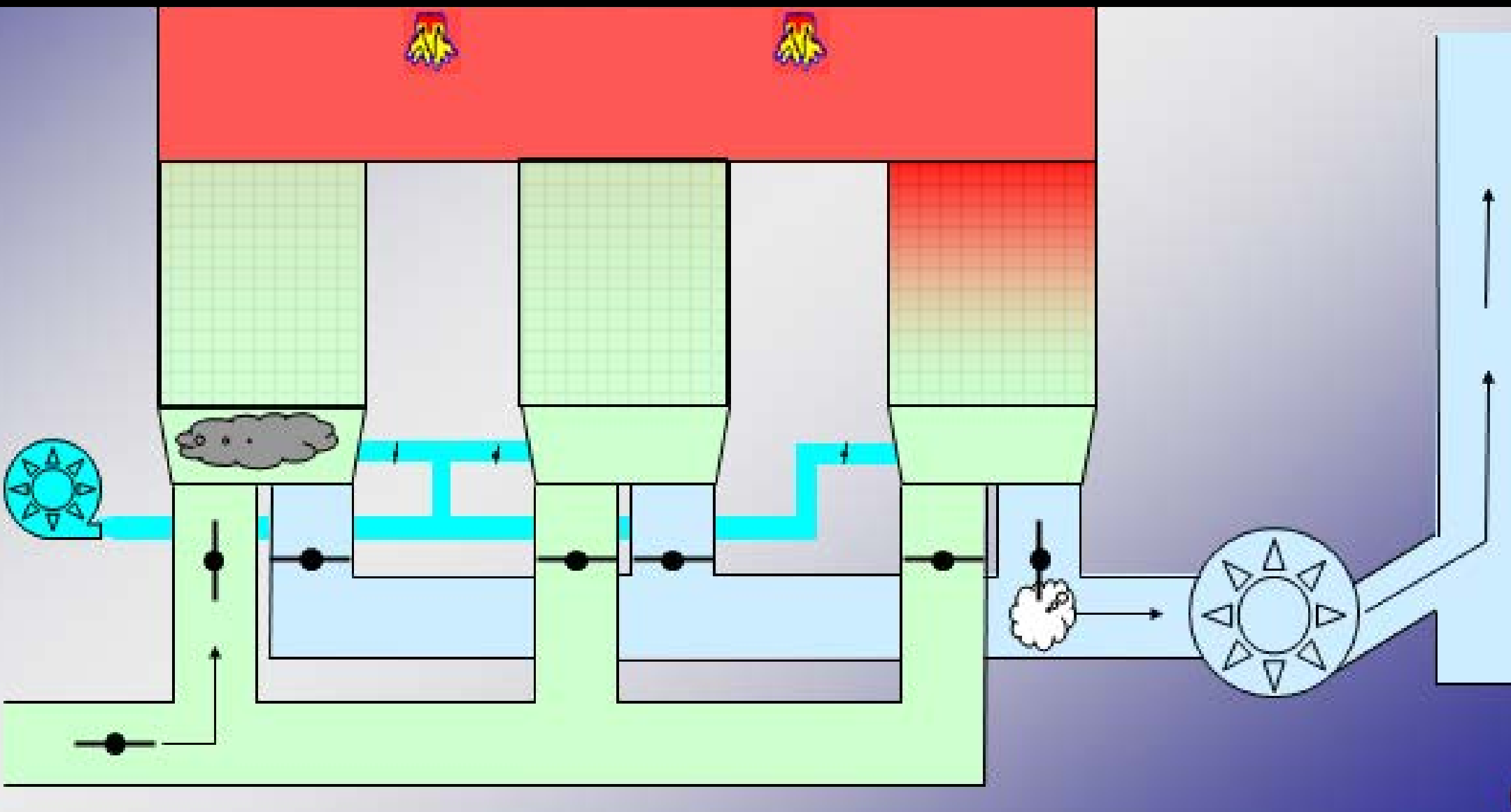
STEP 8:

Clean air releases energy back into ceramic media, lowering air temperature



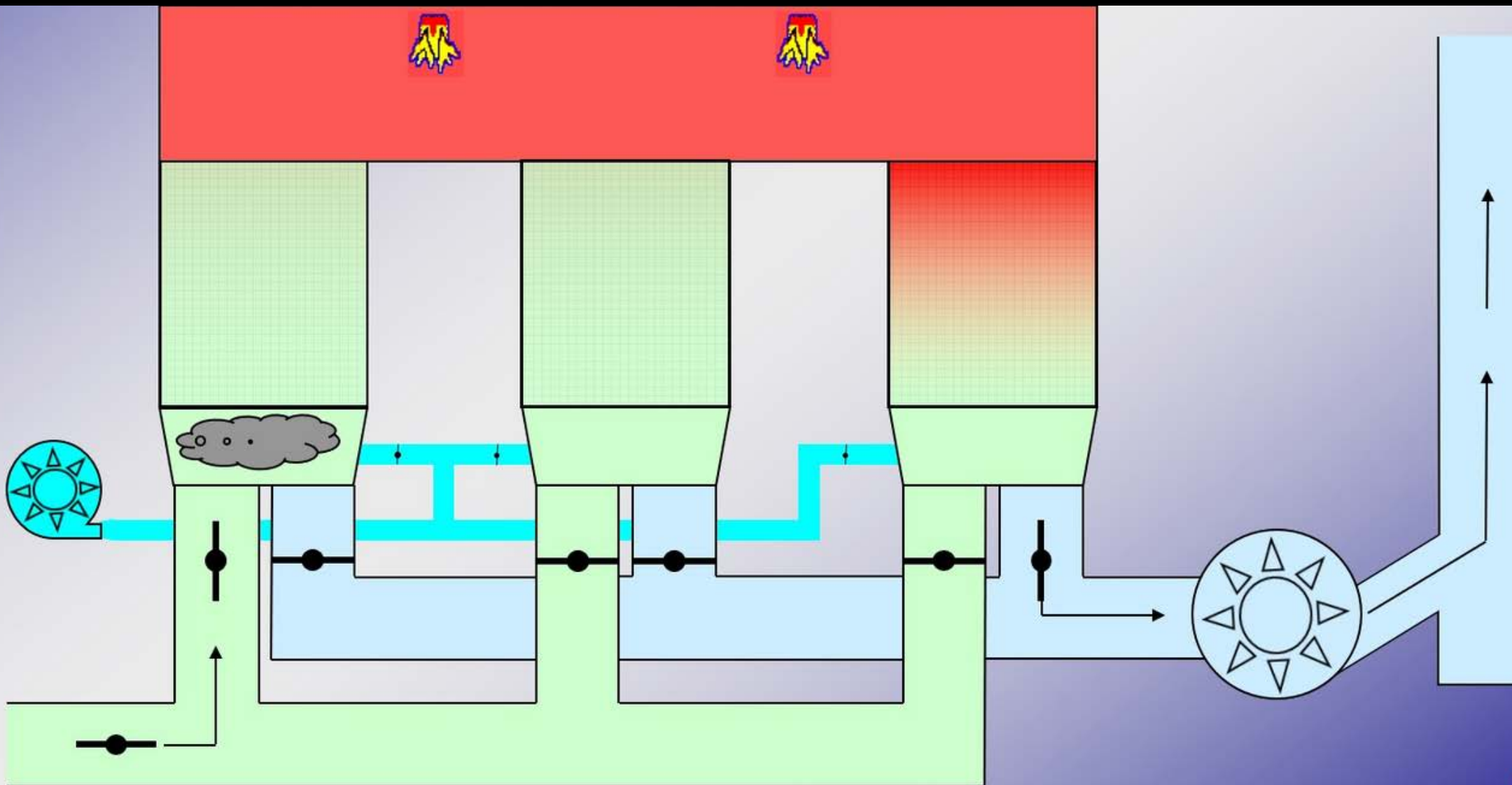
STEP 9:

Clean air exits the RTO



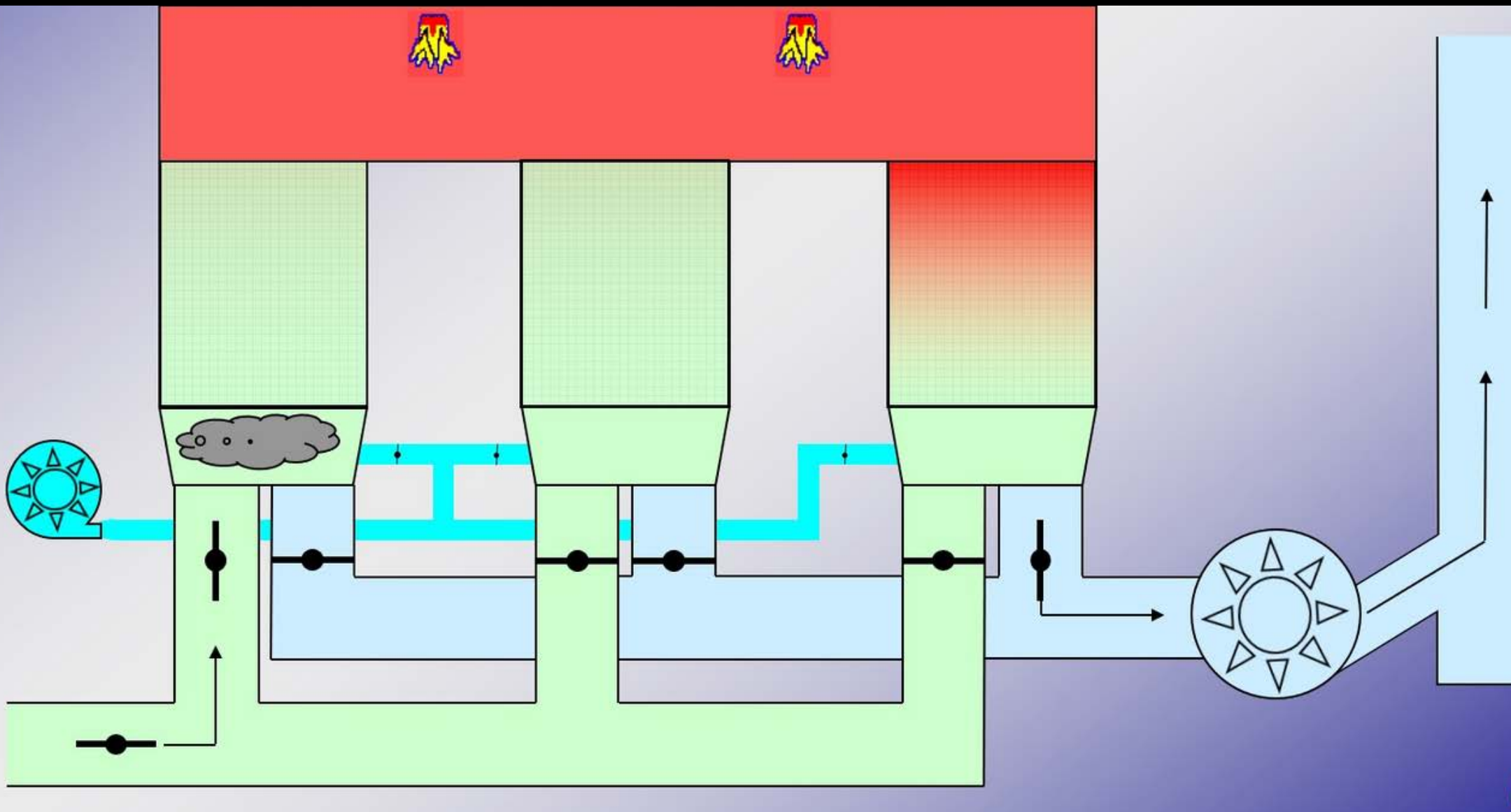
STEP 10:

Valves transition, making Chamber #3
the Inlet Chamber and Chamber #2
the Exhaust Chamber



CYCLE REPEATS

Chambers absorb and release heat cyclically



NOTE:

With a Chamber Purge/Flushing System,
Destruction Efficiency can be 99%+
(without one, DRE limited to 96-97%)

