Regenerative Thermal Oxidizer (RTO)

CATALYTIC COMBUSTION
EMISSION TECHNOLOGIES

Most efficient oxidizer design and best suited for high volume low concentrations

RTO Description

- VOC-laden process air enters the RTO through the inlet manifold
- Poppet valves direct this gas into the first energy recovery chamber where it is pre-heated
- The VOCs are oxidized in the combustion chamber at a typical temperature of 1500° F
- The hot gas exits the combustion chamber through the second energy recovery chamber where the heat is absorbed by the ceramic heat exchange media
- Poppet valves direct this clean gas to the clean air stack
- The airflow is reversed by the poppet valves an average of every 120 seconds
- An optional VOC compensation or puff capture chamber may be added to accumulate the bypassed process air stream during the valve reversal
- The heat recovery efficiency of the system is up to 95%
- The VOC destruction efficiency of the system is typically 98%, 99% achieved with the addition of the optional VOC compensation chamber.

Product Features and Benefits

- Volatile Organic Compounds (VOC) destruction efficiency up to 99%
- Heat recovery efficiency up to 95% lowers fuel consumption
- Structured and random ceramic heat transfer media
- Standard two tower design is an economical solution for most air pollution control needs. Custom tower design available based on application
- Typical unit sizes - 1,000 to 100,000 scfm
- Skid mounted units up to 10,000 (scfm) offer cost effective and turnkey installation
- Quality components provide long life expectancy, reliable operation, and low maintenance
- Optional Features include:
  –Recirculation
  –Hot side bypass
  –VOC compensation (puff capture) chamber

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51035 REV 1/2020