



REGENERATIVE THERMAL OXIDATION RTO EFFICIENT EXHAUST AIR TREATMENT

EISENMANN OFFERS THE REGENERATIVE THERMAL OXIDATION SYSTEM (RTO) FOR THE TREATMENT OF LARGE EXHAUST AIR STREAMS WITH LOW ORGANIC LOAD.

It is used where the treatment of large exhaust air volumes is required in combination with the lowest use of primary energy. The technology is based on ceramic bodies, onto which exhaust air and clean air is alternately directed by a rotating air distribution system. The purified air heats the ceramic bodies, which transfer the stored heat to the exhaust air in alternating operation. The escape of emissions is prevented through an intermediate scavenging air sequence.

The rotor air distribution system, which is in continuous operation, ensures that the pressure conditions in the exhaust air flow are stable in comparison with other systems, so that there are no pressure fluctuations. In addition, the system is extremely low-maintenance as the need for exhaust air and clean gas flaps is eliminated.

Depending on the quality and loading of the exhaust air with organic and/or inorganic substances, the design of the ceramic body can be adapted to requirements.

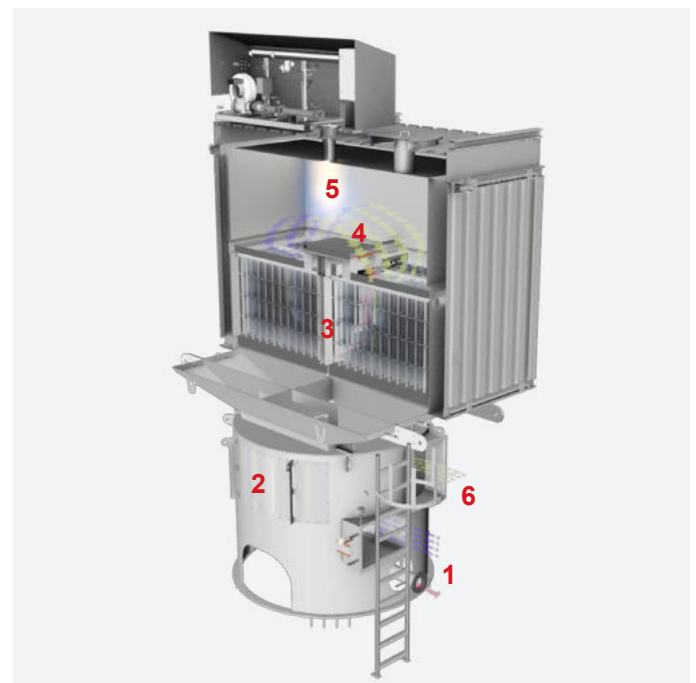
The following systems are available for heat recovery

- ⊗ Generation of warm water, hot water or steam
- ⊗ Air heating
- ⊗ Transfer to other heat carriers such as thermal oil
- ⊗ ORC process

Advantages at a glance

- ⊗ Single reactor system: Compact design and relatively small footprint
- ⊗ Burn out for productions with adhesive substances (tar, condensates, etc.)
- ⊗ No fluctuations in pressure and flow volume due to the continuous operation of the rotor air distribution system

- ⊗ No compressed air consumption for switching flaps
- ⊗ No noise caused by switching flaps
- ⊗ Low maintenance and long service life



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|-----------------------------------|----------------------|
| 1 Exhaust air with pollutant load | 4 Combustion chamber |
| 2 Rotor air distribution system | 5 Burner |
| 3 Heat exchanger | 6 Clean gas |

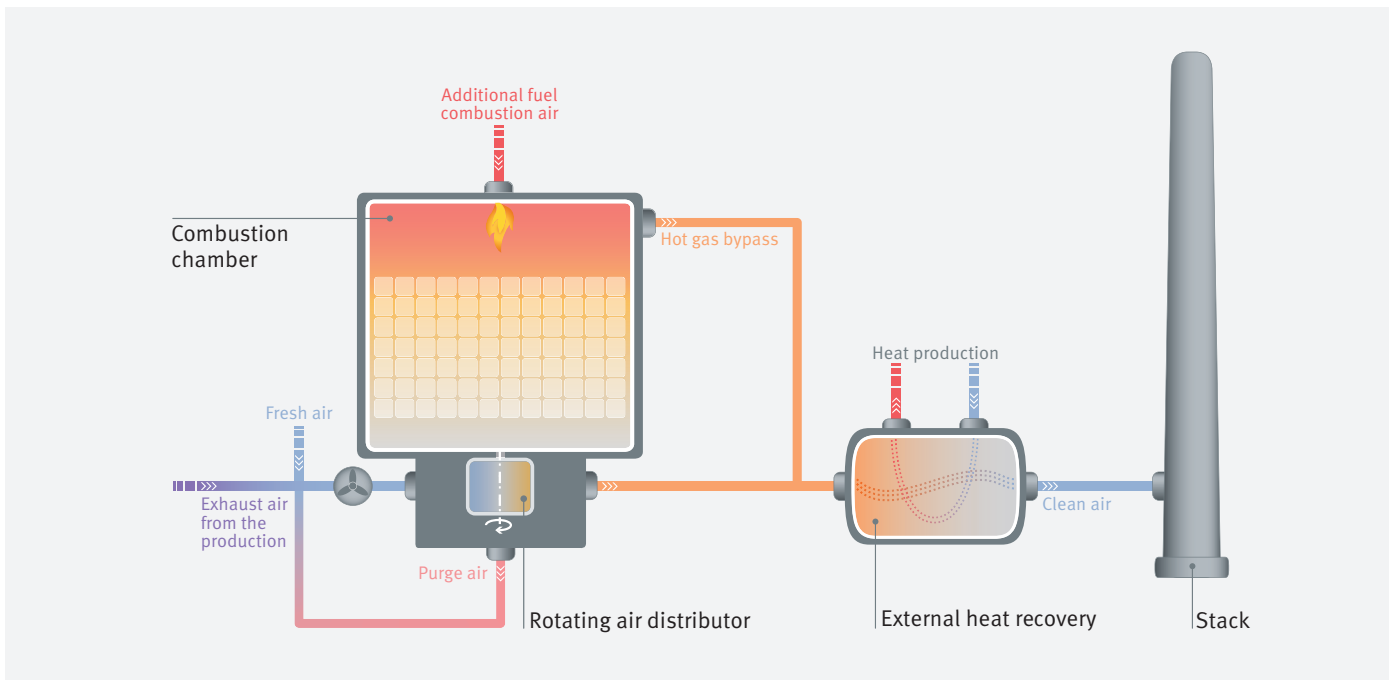
Design of an RTO.

REGENERATIVE THERMAL OXIDATION RTO

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Technical data of the RTO

Type	#0.5	#1.0	#1.5	#2.0	#2.5	#3.0	#3.5	#4.0	#4.5	#5.0	#6.0
Exhaust air flow Nm ³ /h	3,000 - 10,000	5,000 - 16,000	6,000 - 25,000	8,000 - 34,000	11,000 - 44,000	14,000 - 54,000	15,000 - 60,000	18,000 - 72,000	22,000 - 88,000	27,000 - 110,000	35,000 - 140,000
Max. VOC-concentration	20/25 % LEL										



Functional diagram of an RTO.

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