



**PCC-CAP<sup>®</sup>**  
**CARBON ADSORPTION PROCESS**  
**SOLUTIONS**

**Solutions**

*FOR YOUR POLLUTION CONTROL NEEDS*

**PROCESS COMBUSTION CORPORATION**

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**“SOLUTIONS” for Air Pollution Control...**PCC’s goal is to assist industrial customers in meeting the toughest control demands faced today. PCC designs solutions for industrial and commercial manufacturing processes designed to treat waste streams, and remove pollutants.

## **PCC-CAP® is a Granular Activated Carbon (GAC) Adsorption Solution**

**Industrial Solutions:** Granular activated carbon adsorption is an effective solution for removing Volatile Organic Compounds (VOCs) and trace contaminants from vapor phase applications. Harnessing its versatility, PCC offers Carbon Adsorption Process (PCC-CAP®) systems to treat contaminated industrial vapor streams.



**Back-up Devices:** PCC-CAP® Adsorbers are also specifically designed to serve as back-up devices for Recuperative Thermal Oxidizers (T.O.'s), Regenerative Thermal Oxidizers (RTOs), and Catalytic Oxidizers. When your oxidizer requires scheduled maintenance or shutdown, switch over to the PCC-CAP® Adsorber to maximize your production uptime and ensure seamless operation.

## **Advanced Products and Services**

**Wide Granular Activated Carbon Selection** - Activated carbon is a porous material that removes organic compounds from liquids and gases through a process known as “Adsorption”. PCC offers a wide selection of granular activated carbon to efficiently adsorb and remove targeted VOCs.

### **Standard & Custom Units:**

PCC-CAP® adsorbers are available in standard and custom-designed modules and vessels. The units are sized to achieve excellent flow distribution and maximize VOC



removal. ASME Code vessels are available.



**Rental, Pilot Testing & Carbon Media Exchange:** PCC also provides additional services, such as adsorber rentals, pilot testing of waste gases, and activated carbon media exchange services. Once the carbon’s adsorption capacity has been reached, PCC can assist in the disposal, reactivation, and recycling of the spent carbon.



## Vapor Phase Applications across Industries

Activated Carbon Adsorbers can be used for a wide variety of vapor phase applications in vapor emission control, industrial odor control, and other markets.

Carbon Adsorbers are designed for use with both continuous and intermittent industrial waste streams, with high flow and low VOC concentrations. These include process vents, tank filling and tank vents.

PCC-CAP® Adsorbers can receive flows from 20 to >20,000 cfm. Flows > 20,000 cfm are treated by using adsorbers in parallel.

Ideal Applications
VOC Abatement
Process Emissions
Odor Control
Thermal Oxidizer Back-ups

### Storage Tank

#### API Tank

- Oil Water separator
- Tank vent line

#### Tank Vents

- Solvents
- MTBE, TCE
- Asphalt
- Styrene
- Benzene

### Incineration

- Standby VOC Equipment
- Temporary back-up for flares/incineration

### Process Emissions

#### Manufacturing

- Specialty Chemical
- Pharmaceutical
- Refinery
- Synthetic Rubber
- Paper Milling
- Paint & Coatings
- Plastic Resin
- Natural Gas
- Pesticide & Herbicides

#### Reaction Off-gas

- Fugitive Emissions
- Solvent Recovery
- Biofilter Polish

### Process Emissions (con't)

#### Packaging

- Material transfer emissions
- Gasoline terminals
- Compressed Gas Purification
- Corrosion Control for Clean Rooms

### Air Stripper Off-Gas

#### Odor Control

- Landfill
- Sanitary
- Pump Station
- Lift Station
- Animal Products

## Examples of Suitable Compounds for Carbon Adsorption

Chlorinated Hydrocarbons & Solvents

Benzene, Toluene, Ethylbenzene, Xylene

Diesel Fuels & Gasoline Vapors

Methyl tert-Butyl Ether (MTBE)

TriChloroethylene, Chlorobenzene



# THERMAL OXIDIZER BACK-UP DEVICES



## No DOWNTIME! Seamless Operation!

Our customers rely on PCC solutions to keep them running. Downtime - even when scheduled - has its costs, and we want to maximize every minute of our customer's production time. Most operations can't afford to shutdown, and that is why PCC is now offering the proactive solution: **Thermal Oxidizer Back-up devices.**

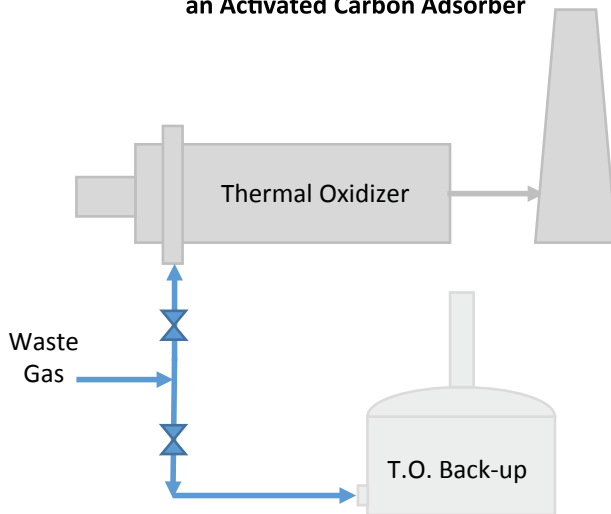
Using proven Activated Carbon Adsorption, **T.O. Back-up devices** offer your process the opportunity for seamless operation. Thermal Oxidizer back-up systems can be easily installed and integrated into your digital control system to support your Thermal Oxidizer or RTO equipment.



## Ideal for industries:

- *Pharmaceutical Facilities*
- *Specialty Chemical Manufacturing*
- *Crude, Refineries, Natural Gas*
- *Paint & Coating Manufacturers*
- *Plastic Resin, Fiberglass & Synthetic Fiber Manufacturing*
- *Pesticide & Herbicide Manufacturing*
- **ANY INDUSTRY that CANNOT AFFORD TO SHUTDOWN!**

Schematic of a Thermal Oxidizer Back-up system with an Activated Carbon Adsorber



1. Scheduled maintenance is required for thermal oxidizer.
2. The integrated PLC diverts the waste gas to the T.O. Back-up.
3. The T.O. Back-up receives waste gas, keeping the plant online.
4. The Thermal Oxidizer maintenance is complete
5. Waste gas diverted back to T.O.
6. Carbon Change-out of T.O. backup is scheduled & completed.

## Customized to keep you running

Activated Carbon Adsorbers are a PCC solution to keep your operations running around the clock. Applying our expertise in thermal oxidation, PCC partners with its customers to develop the back-up strategy that is right for your plant.

PCC-CAP® Adsorbers are designed with the advantages of:

- Customization
- Easy Installation
- Minimal footprint
- Flexibility for wide ranges of flows
- Automation for quick switch over

**Keep your plant running** with a PCC back-up solution for your Thermal Oxidizer or RTO!







