Representatives are located in major US Cities, Canada, Asia, and selected countries, visit www.pcc-group.com to find your local agent.
The PCC Solution

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PCC RTO Advantages

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Regenerative Thermal Oxidizers

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- Energy-Efficient.
  - Up to 95% thermal efficiency resulting in low energy expenditures
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PCC has enjoyed successes working with the following companies (partial list) over the years. Our goal is always to be sure our customers are satisfied with quality, custom-designed and engineered, reliable products and services.

PCC’s Customers

- 3M
- Air Products & Chemicals
- AK Steel
- Albermarle
- Albermarle Catalyst Amsterdam
- Aker Kvaerner
- ALCOA
- ADC
- Arcadis Giffels
- Arizona Chemical
- Arkema, Inc.
- Ashland Polyurethane
- Atlas Roofing Corp.
- Barrick Goldstrike Mines, Inc.
- BASF Corporation
- BC Seneca
- Bayer
- BE&B Construction Co., LLC
- BlueStar Siloxanes
- BP Chemical
- British Gypsum
- C.A.G.
- Cabot Corporation
- Calgon Carbon Corporation
- Catalyst Recovery of LA, LLC
- CertainTeed Corporation
- Codelco Division El Teniente
- Chinook Sciences
- CII Engineering
- Cyanco
- Cytec Carbon Fibers LLC
- Cytec Industries Malaysia Sdn Bhd
- Daikin America
- Dow Chemical E.I. DuPont de Nemours & Co.
- Eastman Chemical
- Elysium Energy
- Engelhard
- Fabrique Carbone de Catalisateurs
- Firestone Polymers, LLC
- Ford Motor Company
- Gas Technology Institute
- Grace Davison
- GrafTech
- GSF Energy LLC
- Harper International
- Henry T. Teichmann
- Honda R&D Americas, Inc.
- Honda Transmission Mfg. of America, Inc.
- Horsh Pharmaceutical Corp.
- Huber Engineered Wood
- Hyundai Motor Manufacturing IES Ltd.
- Ineos
- Ineos Nitrites (UK) Ltd.
- Iron Dynamics
- Israel Military Industries Ltd. (IMI)
- JM Huber
- KOR Inc.
- Koppers
- Kunshan Eastern Rainbow Environmental Equipment Co.
- Kureha Advanced Materials, Inc.
- Landshut Design Institute
- LES Renewable B.V., LLC
- Lipton Company
- Louisiana Pigment Company, L.P.
- Lucite International, Inc.
- Medwestnaco Papers Group
- Metropolitan Biosolids Management, LLC
- Millenium Inorganic Chemicals
- Monsanto
- Montauk Energy
- Morgan AM&T
- National Electrical Carbon
- Niro, Inc.
- Noble Energy
- North America
- Omnova Solutions
- Omya, Inc.
- OPTI Canada
- Orion Carbon
- Owens Corning Asphalt Plants
- Petrosina Alin PetroChemical Company
- Polychemie, Inc.
- Propak Systems Ltd.
- Puralube
- Rubicon/Huntsman Rudolph/Lubbe, Inc.
- Sinopec Anqing Solid Waste Authority of Central Ohio (SWACO)
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- Solvay
- Solverteck, Inc.
- South Dakota Automotive & Chemicals, Inc.
- Suntrol International Co.
- Technical Chemical Co.
- Tembec Industries
- Toray Carbon
- USG
- URS Corp.
- Valspar
- Waak engineering
- Waste Management Renewable Energy, LLC
- Weyerhaeuser
- Yantai Wanhua Polyurethanes Co. Ltd.
The PCC Solution

Located in the South Hills of Pittsburgh, PA, PCC’s Administration, Sales, Engineering, Manufacturing and Research & Development are housed in one location.

Mission Statement...

PCC’s mission is to apply our know-how with confidence to design, supply and service high-tech, energy-efficient, dependable combustion and pollution control systems that provide cost effective environmental solutions for our global customers.

We will work hard together to achieve mutually rewarding, long-term relationships with our clients and suppliers, and we will continuously develop new technologies to meet emerging market needs.

Our Core Values

- **Know-How** - Experienced, Knowledgeable & Competent - PCC’s #1 Core Value
- **Hardworking** - Working Hard Together to Get the Job Done
- **Confidence** - Our Confidence in Our Abilities = Customer Confidence
- **Customer Focus** - Custom Design with a Friendly, Willing Spirit
- **Dependable** - Meeting Commitments to Our Customers & Owners

For over 48 years, Process Combustion Corporation (PCC) has designed, supplied & serviced combustion, heat transfer & pollution control systems worldwide. Headquartered in Pittsburgh, PA, USA; with offices in Beijing, China; and London, England; PCC is recognized as a global leader in pollution control systems. Our creative designs minimize system costs, especially energy consumption, while meeting environmental regulations. Our capabilities include:

- **Thermal Oxidizer Systems**
- **Regenerative Thermal Oxidizers**
- **Bio-Oxidation Systems**
- **Activated Carbon Adsorption**
- **Flameless Thermal Oxidizers**
- **Air Heaters**
- **Specialty Burners**
- **Specialized Combustion Systems**
- **Low NOx, SCR/SNCR Systems**
- **Landfill Gas Thermal Oxidizers**
- **Service & Installation**
- **Engineering Studies**
- **Turnkey Projects**

How PCC’s RTO Works

1. Heat is extracted from the hot purified gas and stored in the reheat recovery chamber as it leaves the combustion chamber.
2. After a period of time, the inlet/outlet valves switch positions and the contaminated process gas is redirected through the hot heat sink recovery chamber, where it is preheated to within 5% of the combustion temperature before it enters the combustion chamber.
3. In the combustion chamber, the burner supplements the 5%, bringing its temperature to 1500°F, at which the VOC is converted to harmless CO2 and water vapor.

- Sets the bar for BACT requirements for gaseous waste streams.
- Waste stream feed forward control ensures stability and prevents nuisance shutdowns.

The PCC Difference

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The PCC Difference

Compare the PCC RTO with any others and you’ll find these distinct advantages:

**Mechanical Valve Drives**

The heart of our RTO is the patented electro-mechanical, 4-way poppet valve system. This valve and control system is designed to eliminate the continuous maintenance brought about by the endless movement and slamming of the disk in typical poppet valve RTOs.

Our proven patented mechanical valve drive system operates the flow control dampers smoothly in both two-chambers and larger, multi-chamber designs. The two valve disks are concurrently reversed by a common camshaft that intermittently, but consistently moves the valve disks between seats in less than 1/2 second.

Advantages:

- Virtually no pressure spikes and contaminant bypass as the valves are tied to one camshaft and operate in unison.
- No leaky/erratic hydraulics that change frequency as the weather dictates.
- No moisture freezing pneumatic lines and cylinders.
- No need for maintenance intensive pneumatic or hydraulic operators. This feature alone will substantially increase your savings by minimizing maintenance and equipment downtime.

**Integrated Manifolding**

The PCC RTO assembly incorporates the inlet and outlet exhaust manifolds into the RTO’s overall shell configuration, rather than fabricating the typical network of bulky, exterior space-consuming manifolds. This eliminates external RTO ductwork and insulation, enabling the system to sit flat on a concrete pad without legs.

This streamlined assembly design decreases maintenance costs and creates a compact footprint that is cost-effective to manufacture and install.

**Heat Recovery Media**

PCC utilizes a patented ultra low pressure drop media specifically designed for use in PCC RTOs. The combination of high heat recovery with low pressure drop results in significantly lower gas and electric usage, as well as higher VOC destruction efficiency, making it one of the most environmentally responsible pollution control units available today.

The PCC Solution

PCC’s current RTO is the genesis of more than 30 years of experience and discovery in RTO technology. With seven RTO related patents and hundreds of worldwide installations, chances are we’ve installed a system in an application just like yours.

We put our experience to work for you by thoroughly understanding your process, helping to select the right equipment and optimizing the system’s performance to maximize your investment.

With pollution of all types at the forefront of everyone’s minds these days, we are more committed than ever to supplying a low emission, simple, reliable, energy-efficient and cost-effective means of cleaning tomorrow’s air today.

**RTO Benefits**

- Global emission regulatory compliance – now and in the future.
- Lowest operating cost and lower CO2 emissions
- Greatest reliability, lowest maintenance cost of any RTO
- Quick, 3-day installation
- Lowest pressure drop, highest thermal efficiency
- Operator friendly
- Proven leader in pollution equipment technology

**RTO Features**

- Guaranteed 99% VOC destruction efficiency
- Up to 95% heat transfer efficiency
- Patented electro-mechanical variable valve drive - no pneumatics or hydraulics and none of their related problems
- Completely modular
- Exclusive, light weight recovery media
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