UltraCat Catalytic Filters are Unique – and Superior

- Structure and composition
- Operating characteristics
- Long service life
- Large installed base
- Proven long term: nearly a decade in glass

Contact Us
> Sales Department
Phone: 989-723-7838
Email: salesdpt@tri-mer.com

The Tri-Mer Headquarters is sited on 12 acres near Detroit, Michigan.

The Heart of the Campus: a 250,000 sq. ft. Engineering & Manufacturing Facility

More installed systems than all other suppliers combined
Nearly a decade in glass: container, flat glass, tableware

Tri-Mer UltraCat is the proven solution for air-fuel and oxy-fuel gas furnace emissions:
- PM
- NOx
- SOx
- HCl
- HF
- Metals
- Mercury
- Hex Chrome
- Dioxins/Furans
- VOCs
- CO
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Nano-catalyst embedded in the filter walls destroys NOx, dioxins, Cement O-HAPs.

Treats Particulate, NOx, CO, Organic HAPs, dioxins, SO2, SO3, HCl, and mercury.

Catalyst is inside the filter walls, protected from PM blinding and poisoning.

CLEAN AIR
POLLUTED GAS

Filter Tube with Embedded Nano-catalysts

1. Dry Sorbent Injection: Dry powdered sorbent – hydrated lime – is injected into the duct. It reacts immediately with the SO2, SO3, and HCl to form solid particles that will be captured by the ceramic filter.

2. Ammonia Injection: Aqueous ammonia is atomized and sprayed into the duct. It immediately turns into a gas and mixes with NOx. This mixing is not affected by the process PM or sorbent PM.

3. Ceramic Filters: The NOx and ammonia mixture react on the enormous surface area of the nano-catalysts embedded in the filter walls. The mixture is free from particulate that can blind or poison the catalyst, so the reaction can occur more efficiently and across a much wider temperature range. NOx is broken down into harmless N2 and water vapor. There is minimal ammonia slip.

4. Clean Gas: Treated air exits the ceramic filter system, drawn to the stack by an induction fan.

Multiple Plenums for Projects of Any Size

• Treats any gas flow volume – plenums are placed in parallel.

• Multiple plenums provide built-in redundancy to ensure up-time. No “ESP bottleneck.”

• If a plenum is taken off-line for service, the other plenums treat the entire flow at a temporary higher pressure with no change in performance.

Our Specialty

Turnkey project delivery, from design through commissioning – guaranteed performance and schedule

• Proprietary filter system designs
• Integrated PM, NOx, SO2, HCl removal
• Engineering – all disciplines
• Regulatory agency support

Tri-Mer has the Most Effective Emissions Control Available

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Catalyst is inside the filter walls, protected from PM blinding and poisoning.

Filter Plenum Operation

1. Compressed air manifold for reverse pulse jet cleaning
2. Filter tubes
3. Dirty Air Inlet
4. Clean Air Exit
5. Plenum
6. Filter seal
7. Particles captured on outside of tube
8. Process PM and sorbent falls into hopper
9. Clean Air Exit
10. Ammonia Injection: Aqueous ammonia is atomized and sprayed into the duct. It immediately turns into a gas and mixes with NOx. This mixing is not affected by the process PM or sorbent PM.

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Dirty Air Inlet
Process PM and sulfur PM into hopper

Compressed air manifold
Reverse pulse jet cleaning

Clean Gas Exits
Clean Air Exits

Filtration: The gas stream enters the filter housing, and the particulate from the process and sorbent is captured on the outer surface of the filter. Filters are periodically cleaned (about twice a day for glass) with a burst of compressed air while filter housings remain on-line.

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Filter Housing: The gas stream enters the filter housing, and the particulate from the process and sorbent falls into hopper and exits to waste.

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• Proven system designs
• Integrated PM, NOx, SO2, HCl removal
• Engineering – all disciplines
• Controls, CEMS, systems integration
• Installation, training, start-up

Dozens of Glass Furnaces with Tri-Mer Systems

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