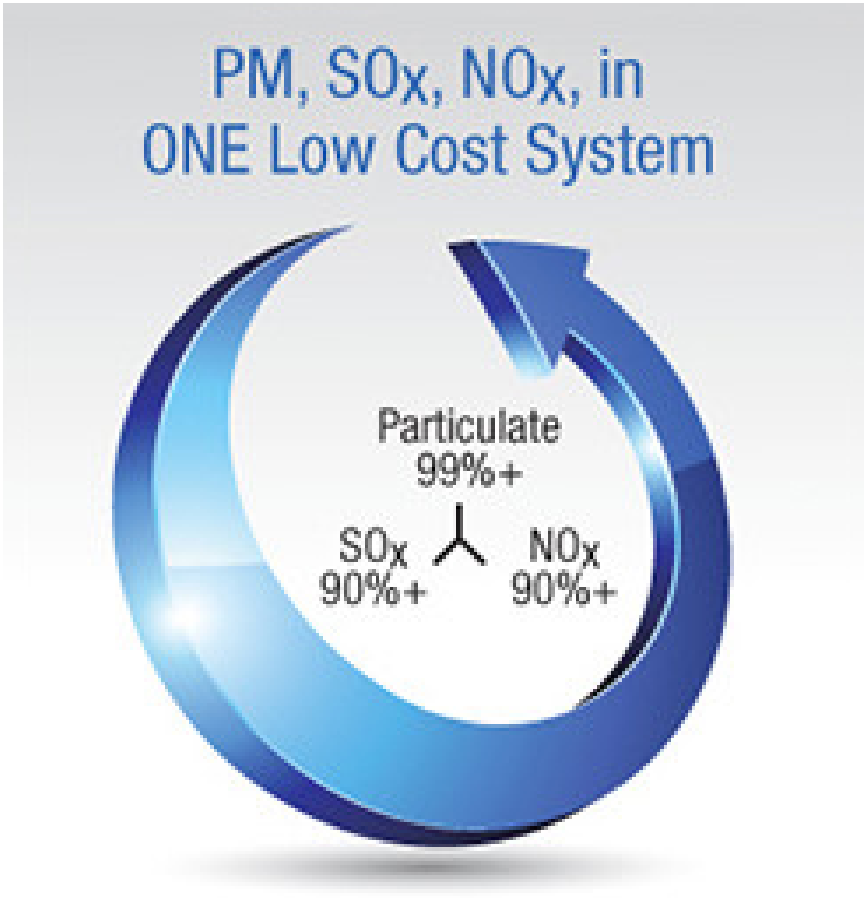
Hot Gas Filtration

Controls Particulate, SO2, HCl and NOx in one system

UltraCat Hot Gas Filtration

Tri-Mer UltraCat Catalytic Filter Systems are state-of-the art for removing particulate (PM), SO2, HCl, mercury and heavy metals at high temperatures up to 1650°F, in one single system. Simultaneously, the ceramic catalyst filters destroy NOx, cement organic HAPs, and dioxins. Systems can be configured for any combination of the pollutants.

This hot gas filtration system is completely dry, with no water consumption. Disposal of the dry collected waste is straightforward. Large gas flow volumes can also be accommodated. UltraCat also has an add-on component to eliminate burdens associated with dry sorbent injection, SorbSaver.



Treatment of Pollutants:

- NOx destruction over 90%. In addition to treating PM and acid gases, the catalyst filters have nanobits of NOx catalyst embedded throughout the filter walls. These filters provide effective NOx destruction using

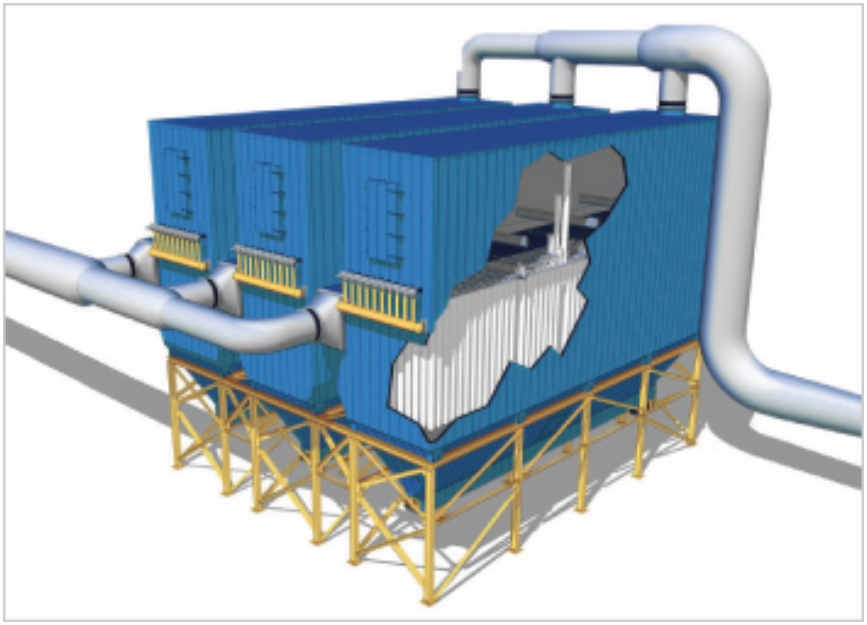
How

integrated aqua ammonia injection. Replaces conventional SCR.

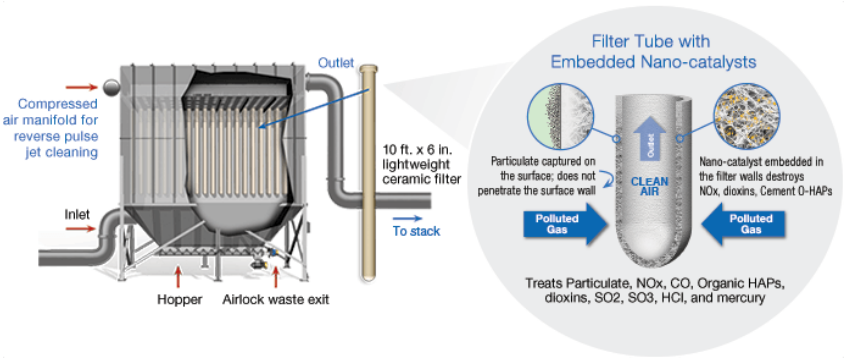
- NOx destruction takes place at lower temperatures than standard SCR big-block reactors that require 650°F. Ceramic Catalyst filters show good destruction as low as 350°F and over 90% at 400°F for most applications. Equally effective at higher temperatures up to 750°F.
- Particulate (PM) is removed to ultra-low levels (<2 mg/Nm3, 0.001 grains/dscf) at temperatures up to 1650°F. Ceramic filters are highly effective on submicron PM: equal to fabric bags and better than ESP. The UltraCat System is an excellent replacement for spray dryer ESP.
- SO2, SO3, HCl, HF, and other acid gases treated at over 90% removal using integrated dry sorbent injection.
- Dioxins (up to 99%) and mercury can be removed within certain temperature ranges.

System Design

Modular design of the housing units allows filters to be configured to handle even large gas flow volumes. When large flow volumes are treated, modules (plenums) are put in parallel. A single module can be taken off-line if needed, and the remaining two or more modules continue to operate at a slightly higher pressure (designed into the fan) without interruption of the process itself and with no appreciable change in emission control performance.



Systems are manufactured to customer requirements in materials suited to the temperature of operation, including mild steel and stainless alloys. Systems range from small to 100,000s cfm.



Used for more than 400 applications worldwide:

- Boiler MACT compliance for coal, biomass, wood
- Cement NESHAP for Organic HAPs, VOC
- Glass manufacturing for flat, container, tableware
- CIWSI MACT for incinerators, medical waste
- Diesel emissions for stationary ships at dock
- Metal smelting, mineral processing
- Carbon black production
- Fluidized beds
- Chemical production
- Soil cleaning
- Foundry processes
- Energy production
- Fire testing
- Titanium dioxide production
- Catalyst manufacturing
- Platinum smelting
- Metal powder production
- Activated carbon production
- Other specialized high-temp applications

How

Regulations

Tri-Mer hot gas filtration systems are compliant with the following federal standards:

Boiler MACT • CISWI MACT • Lime MACT 2 • HWC MACT • Cement NESHAP • Title V Compliance CARB Diesel Regs • EPA Glass Regs • EPA Ceramics Regs

Tri-Mer High Temperature Filter Systems are a cost-effective solution to many pollution control issues.

Contact Nick Evans

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Request a Quote!

• PARTICULATE (PM 10, PM 2.5, PM 1.0) • NOX • SOX (SO2, SO3) • HCL, HF • METALS (SELENIUM, ARSENIC ...) • MERCURY • HEXAVALENT CHROME • DIOXINS / FURANS • SELECTIVE VOC (CEMENT O-HAPS) • ADD-ON CO MODULE AVAILABLE

How