

UltraTemp Filtration System Controls Particulate PM, HCl/SO₂, NO_x & CO

UltraTemp meets Boiler MACT standards, can operate up to 1650°F

Tri-Mer Corporation, specializing in advanced technologies for the control of fine particulate and pollutant gases, has introduced **UltraTemp Filtration**, a hot gas filtration system that captures particulate to extremely low levels, including submicron and ultrafine PM.

The heart of the UltraTemp Hot Gas Filtration System is a new generation of ductile ceramic filter tubes, manufactured from low-density ceramic-coated fibers.

Particulate Removal

Guaranteed to meet the proposed Boiler MACT standards for new and existing biomass boilers and existing coal boilers. **Guaranteed performance to less than 0.008 lb/MMBtu.** Typical PM removal to 0.001-0.004 lb/MMBtu. In other words, outlet concentration is less than **0.001 grains/dscf** or **2.0 mg/Nm³**.

Acid Gas Removal

The system incorporates dry sodium bicarbonate sorbent injection for very efficient dry scrubbing of SO₂, HCl, and other acid gases. **Typical SO₂ and HCl results – up to 98% removal.**

High NO_x Control, Effective on Dioxins

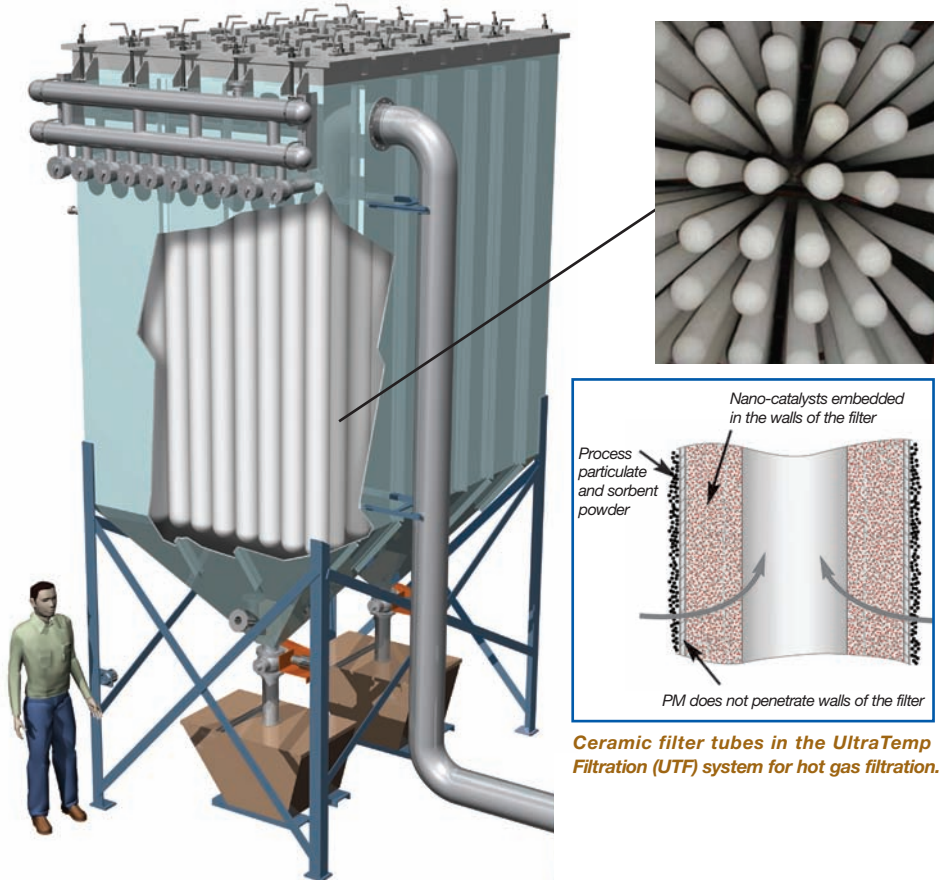
Using filter elements with nano-bits of proprietary catalyst embedded throughout the 1" filter walls, the UTF can achieve excellent NO_x removal at **temperatures as low as 350°F**. Urea/ammonia is injected upstream of the filters, reacting with the nano-catalysts and NO_x to form harmless nitrogen gas and water vapor. The proprietary catalyst is highly resistant to sulfur poisoning, and protected from particulates because it is inside the filter walls (see graphic). **Typical NO_x results – up to 95% removal.**

The catalyst filters are also very efficient at removing dioxins, typically at 99+%.

CO & Mercury, Boiler MACT

The Boiler MACT also regulates CO. If CO is managed in the boiler, outlet NO_x rises, and vice versa. The best strategy for Boiler MACT compliance is to control CO in the boiler, and allow the UltraTemp system to destroy the NO_x.

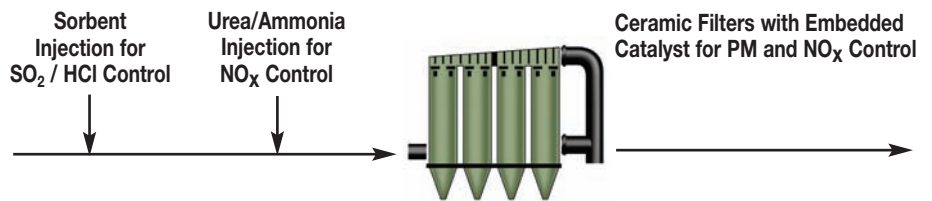
Boiler MACT Solution



UltraTemp filter configuration typical of the 400+ filter applications worldwide.

Ceramic filter tubes in the UltraTemp Filtration (UTF) system for hot gas filtration.

UltraTemp Filtration System for Control of Particulate, SO₂ / HCl, and NO_x



Mercury removal can be achieved at different levels by using dry sorbent injection, including activated carbon of various formulations. The mercury removal strategy is customized in accordance with the other constituents of the flue gas.

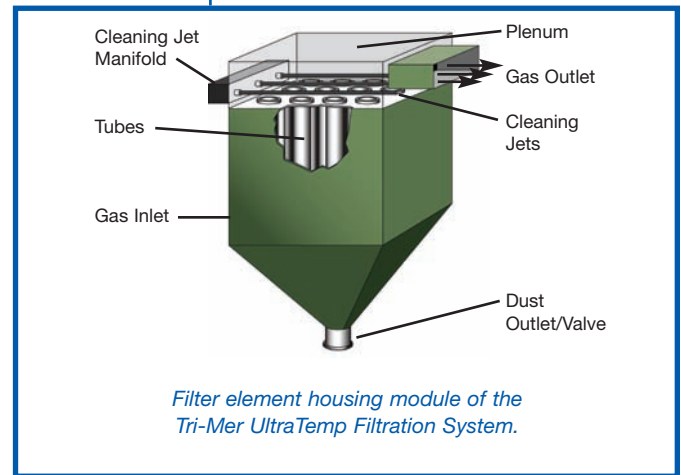
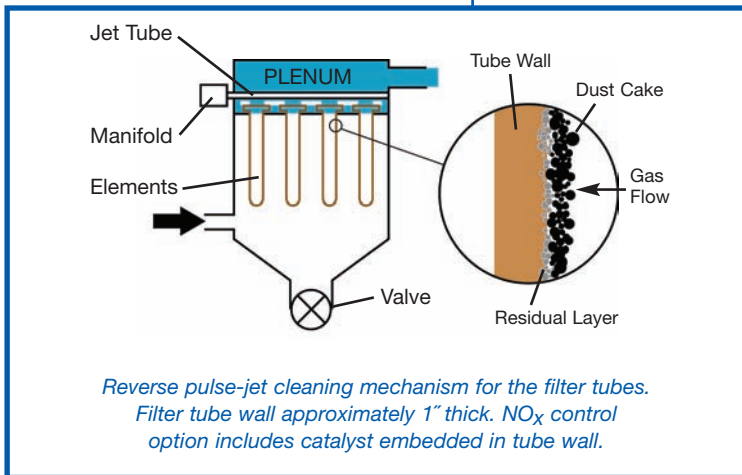
Operation and Maintenance

Tri-Mer's UltraTemp Hot Gas Filtration System uses a baghouse configuration with a reverse pulse-jet cleaning action. The filters are back-flushed with air, inert gas, syngas, or other appropriate gases. It has a

reliable sealing mechanism that is easy to access, and the design has been engineered for easy installation and maintenance. Filter elements are manufactured in various sizes, the largest of which is ten feet long and

six inches in diameter, including an integral mounting flange.

Pressure drop across the system is approximately 8 inches w.g.



Primary Applications

- **Boiler MACT** compliance for coal, biomass, wood
- Syngas cleaning
- Glass furnaces
- Waste incineration
- Waste pyrolysis
- Metal smelting, mineral processing
- Chemical production
- Many specialized high temperature applications

More Applications

AIR POLLUTION CONTROL

- Cement production
- Medical waste
- Soil cleaning
- Foundry processes
- Fluidized beds
- Energy production
- Fire testing

PRODUCT COLLECTION/RECOVERY

- Titanium dioxide production
- Fumed silica production
- Carbon black production
- Catalyst manufacturing
- Platinum smelting
- Metal powder production
- Activated carbon production

Tri-Mer Corporation, a technology leader in air pollution control, is the exclusive manufacturer of the UltraTemp Filtration System, and provides turnkey engineering, manufacturing, installation, and service through its Michigan facility.



www.tri-mer.com

1400 Monroe St. • PO Box 730
Owosso, MI 48867

Phone: (989) 723-7838

Fax: (989) 723-7844

E-mail: salesdpt@tri-mer.com

For information contact:

Kevin Moss, (801) 294-5422

kevin.moss@tri-mer.com