

SUBSTRATES NEXT®

WHY MIRATECH NEXT® OR VORTEX®?

- **Performance Emissions**
 - 3-way Catalyst: NOx, CO, & HC
 - Natural Gas Oxidation: CO, HC, HAPs
 - Diesel Oxidation: CO, HC, HAPs, PM
- **Low Cost of Ownership**
 - First-Time Permit Certainty
 - Quick and Easy Maintenance
 - High Performance, Long Life, High Value
- **Two Year Warranty**
- **Full Service Catalyst Wash & Repair**
 - 'Free Wash for Life' on Substrates

APPLICATIONS

- **Lean-Burn or Rich-Burn Engines**
 - 20 to 20,000+ hp
- **Natural Gas, LPG, Diesel or Dual-Fuel**
 - Gas Compression
 - Power Generation
 - Air Compression
 - Liquid or Petroleum Pumping
 - Irrigation Systems

FEATURES & BENEFITS

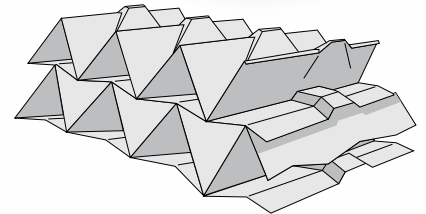
- **Flat-Top Bonnet™ Element Design, Improved Gasket Material**
 - Eliminates Blow-By & Enhances Catalyst Performance
- **Virtually Indestructible Metal-Monolith Element**
 - Patented Construction
 - Superior Mechanical Strength, Thermal Durability & Handling Safety
- **Self Locking Mechanical Design**
- **High Catalyst Activity**

VORTEX PRODUCT ADVANTAGE

MIRATECH'S NEXT® catalyst uses a revolutionary substrate with cascading turbulent zones to create an element that is more efficient and durable than comparable industrial engine catalysts with a traditional open-foil design.

Efficient and Durable

In addition to creating turbulent exhaust flow, the grooves in the MIRATECH NEXT® enables every layer of the catalyst substrate to be interlocked. This feature not only strengthens the NEXT®, it reduces incidences of telescoping while still accommodating back-pressure limits comparable to open-foil catalysts.



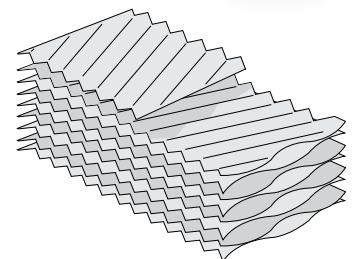
SUBSTRATES VORTEX®

NEXT PRODUCT ADVANTAGE

MIRATECH'S VORTEX® catalyst incorporates advanced corrugated foil substrate technology to create a catalyst with static mixing, mass transfer and stability characteristics that are superior to any shaped element in the marketplace.

Efficient and Durable

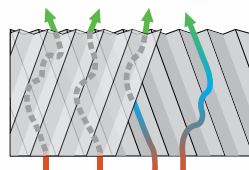
The VORTEX® features a corrugated substrate that allows every layer of the catalyst to be stacked in an off-setting pattern. The off-set, aside from producing beneficial turbulence, forms overlapping points that are fused together by resistive welding. This makes the VORTEX® significantly more efficient and durable than conventional open-foil catalysts.



SUBSTRATES NEXT® & VORTEX®



NEXT®



VORTEX®

Each groove in the NEXT® substrate creates a separate turbulent zone in the channel. Multiple turbulent zones boost catalyst performance because more emissions are allowed to react with the precious metal compounds that line the substrate walls.

VORTEX's® corrugated substrate is layered in an offsetting corrugated herringbone pattern that creates turbulence. Throughout the substrate, the Vortex's static mixing increases catalytic reaction.

INNOVATIVE DESIGNS

- Creates turbulent airflow through the width of the substrate
- Improves catalytic reaction within the substrate channel
- Reduces pollutants more effectively than open-foil catalysts
- Stronger than conventional open-foil catalysts
- Compatible with non-MIRATECH housings including GT Exhaust Systems, Johnson Matthey, EMIT, Sud-Chemie, Maxim and others

- Off-the-shelf availability for many sizes
- Flexibility:
 - Rectangular structure allows MIRATECH to modularly design catalysts of any size
 - Round structure allows MIRATECH to engineer catalysts with unique diameters (large or small)
- Two-year warranty
- Free washes for life

Learn More: Phone · Email · Web · "The Emissions Monitor" Subscription

NSCR · SCR · DPF · Silencers · AFRC · NESHAP CPMS · Field Service · Training · Turnkey



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WHY MIRATECH?

- Advanced Technology
- Product Range: 20 to 20,000+ hp
- Innovative, Cost-Effective, Comprehensive Emissions Solutions
- RICE NESHAP Compliant
- Turnkey Projects
- Unsurpassed Experience & Expertise
- Fast, Responsive, Customer-Focused Service and Support
 - Prevent Non-Compliance Fines
 - Improve Engine & Catalyst Performance
 - Cut Maintenance Costs
 - Maximize Catalyst Life
- Full Service Catalyst Wash & Repair
 - 'Free Wash for Life' on Next® & Vortex® Substrates
- Project Management
- Onsite Services
 - Supervision
 - Technical
 - Skilled
- Product O&M Training
- Replacement Parts

EMISSIONS SOLUTIONS

- Catalysts
 - 3-Way
 - Oxidation (Natural Gas & Diesel)
 - HAPs
 - Selective Catalytic Reduction (SCR)
 - Urea Hydrolysis
- Housings
 - NX
 - IQ
 - CBS
 - CBL
 - Silencer Combinations
 - VX Series
 - RX Series
 - ZX Series
 - Ground Access
- Controls
 - SCR
 - Active DPF
 - Air Fuel Ratio (Rich & Lean Burn)
 - Monitors
 - RICE NESHAP
 - DPF