

# MobiClean™ Particulate Filter for Diesel Locomotive Applications in Europe

Faster Freight Cleaner Air - 2006

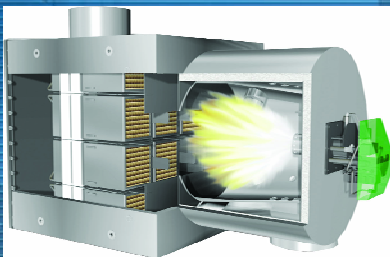
Don Newburry  
Research & Development Manager  
MIRATECH Corporation



# MobiClean™ Particulate Filter

## Exhaust Soot Filter System for Mobile Diesel Applications

Regeneration without NO<sub>2</sub>



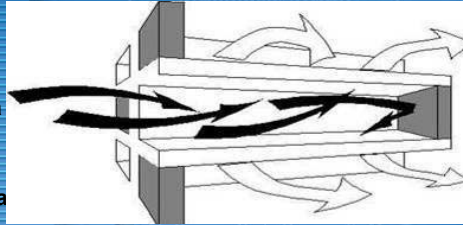
- Modular System for Engines between 150 and 3,000 kW
- Silicon Carbide Filter Elements
- Active Regeneration Burner for Low Exhaust Temperatures
- Excellent Sound Absorption (Replaces Silencer)
- Compact Design for Tight Spaces
- Rugged Design for Demanding Applications:
  - Locomotives
  - Railway Construction Machines
  - Mobile Power Plants
  - Ferries and Yaughts
  - Mining Equipment



## » MobiClean™ Filters

### Silicon Carbide Filters

- » Particulate is trapped on the surface of a catalyzed, high temperature, wall flow, porous Silicon Carbide filter
- » Silicon Carbide provides superior thermal durability over metal fiber and cordierite filters
- » Sulfur Tolerant Catalyst Applied to Reduce Regeneration Temperature
- » Level 3 CARB Verification for Stationary Diesel Generators



### DESIGN

– Designed and Manufactured by HUG  
Engineering in Switzerland

## MobiClean™ Technology Details

– Designed Specifically for Locomotive Applications

- High vibration and shock loads
- Low exhaust temperatures majority of time

### INSTALLATION

- Flanged into exhaust piping
- Electronics tied to power supply and monitoring point in exhaust
- Diesel fuel supply pressure to burner = 1.5



**Individually Encased  
Multi Clean™ Feature  
Place**

**Filters Can Be  
Removed for  
Cleaning/Replacem  
ent**

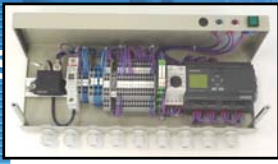
**Lifting Handle for  
Carrying Filters  
Side or Top Access,  
Depending on**



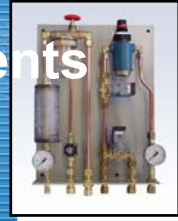
Burner assembly



Control unit



Fuel dosing unit



Pressure gauge with pressure switch



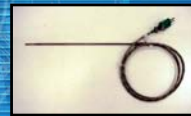
Control and safety thermocouple



Booster pump



Thermocouple for flame detection





# First Installed on MobiClean™ Experience

Maintenance  
Vehicles in  
Switzerland in 1997

Applied on ~73 New  
SBB Am843  
Locomotives

Applied on Several  
Hundred Railway  
Maintenance  
Vehicles



# SBB Am843 1,500 kW Switcher

MobiClean  
S26  
CAT 3512B  
DITA





## MTU 20V4000, High Speed, 4-Stroke Engine

Vossloh  
MobiClean™ with Dual  
Burner System



## (204 kW) Rail Track Machine



MobiClean™ S4



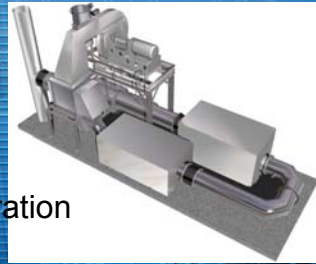


**MIRATECH**  
EMISSIONS SOLUTIONS

# Train Station Paris



Stationary  
Locomotive  
Exhaust Clean  
Up System



4 Units, All with Same Stack Configuration  
2.4 MW per Locomotive



» For Additional Info Contact:



**Don Newburry**  
Research & Development Manager  
**MIRATECH Corporation**  
918-794-9370  
[dnewburry@miratechcorp.com](mailto:dnewburry@miratechcorp.com)

Visit our Web site:  
[www.miratechcorp.com](http://www.miratechcorp.com)

