

Energy Efficient

KM-4



How is the KM-4 Energy Efficient?

The KM-4 is manufactured to use a minimum of fuel for thermal remediation projects.

There are three main design strategies: (1) fast, efficient heat transfer to the soil, (2) recycling heat whenever possible, and (3) providing the precise energy value to each component.

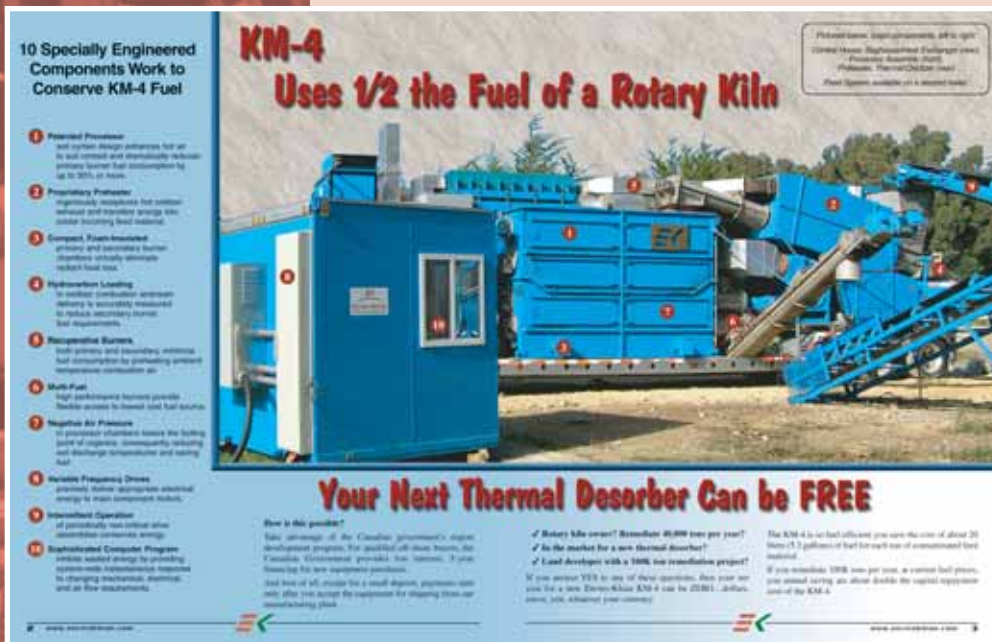
The patented soil curtain and preheater designs are highly efficient at transferring heat to the soil. The preheater also utilizes waste heat from the thermal oxidizer to preheat the incoming material. The motors are either

managed by variable frequency drives, or cycle on and off to conserve energy.

The combustion air for the burners is supplied by waste heat from the air-to-air heat exchanger. And, the PLC operates the system within strict parameters of temperature and pressure to eliminate the problem of wasted energy.

Enviro-Klean's KM-4 is a high-temperature thermal desorber (or hot plant) and the brochure shown at left describes the energy savings in detail.

- Fast energy transfer
- Hot air recycling
- Variable frequency drives



10 Specially Engineered Components Work to Conserve KM-4 Fuel

KM-4 Uses 1/2 the Fuel of a Rotary Kiln

Your Next Thermal Desorber Can be FREE

How is this possible?
Due to a range of the Canadian government's super development program, for qualified off-shore firms, the Canadian Environmental protection has initiated a pre-financing for new equipment purchase. You can take full advantage for a small deposit, progress payments after you accept the equipment for shipping from our manufacturing plant.

✓ Rotary kiln cost? Minimum \$1,000,000 per year!
✓ In the market for a new thermal desorber?
✓ Fuel desorber with a 100% low specification project?
If you answer YES to any of these questions, then you are just like a new Enviro-Klean KM-4 can be 200% efficient, more, without your consent.

The KM-4 is the best efficient you can purchase of about 20 tons (5.7 gallons of fuel for each ton of untreated soil material).
If you purchase 1000 tons per year, or around half year, you annual savings are about double the capital expense and of the KM-4.

1. **Patented Preheater**
and curtain design enhances hot air to soil contact and preheats incoming primary burner fuel consumption by up to 30% or more.

2. **Proprietary Preheater**
rigorously designed for optimal exhaust and turbine energy into central burning heat system.

3. **Compact, Fuel-Insulated**
primary and secondary burner chambers virtually eliminate exhaust heat loss.

4. **Hydrocarbon Loading**
in recirculation chamber primary burner is accurately measured to reduce unnecessary burner fuel requirements.

5. **Recirculated Burners**
both primary and secondary, minimize fuel consumption by generating maximum temperature combustion air.

6. **Multi-Fuel**
high performance burner provides flexible access to diesel and fuel sources.

7. **Highly Efficient Air Preheater**
to preheat exhausts leaves the heating level of exhaust, conserving, reducing and discharge temperature and saving fuel.

8. **Variable Frequency Drives**
prevent fuel waste, maximize electrical energy to input component, reduce.

9. **Intermittent Operation**
all potentially fuel critical areas monitored, conserving energy.

10. **Specialized Control Program**
recycle wasted energy by providing system-wide temperature response to changing mechanical, electrical, and air flow requirements.

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Detailed fuel efficiency brochure



Fuel Efficiency Benefits



Choice of Fuels

Shown on the left is a KM-4 fitted with a multi fuel system. There is a separate fuel train for oil, propane, and natural gas. This option allows the use of the most convenient or competitively-priced fuel available at the work site. Alternatively the machine is available with a burner that uses any one of these three fuels.

Fuel represents the single highest operating component for any thermal desorber. The KM-4 allows you to choose the best fuel option for your needs.



Low Remediation Cost

The KM-4's low energy cost helps to create more thermal remediation options. Shown above is the optional material feed system, complete with trommel, which is connected directly to the control house. The KM-4 can also be configured to work with other feed systems.

Fast Capital Cost Recovery

Because the KM-4 is so fuel efficient compared with competing thermal remediation equipment, it's possible to recover the capital cost of the equipment within a year, depending on the throughput. A saving of 20 liters of fuel per tonne adds up quickly, and over the life of the equipment can equal 2 or times the original capital cost.