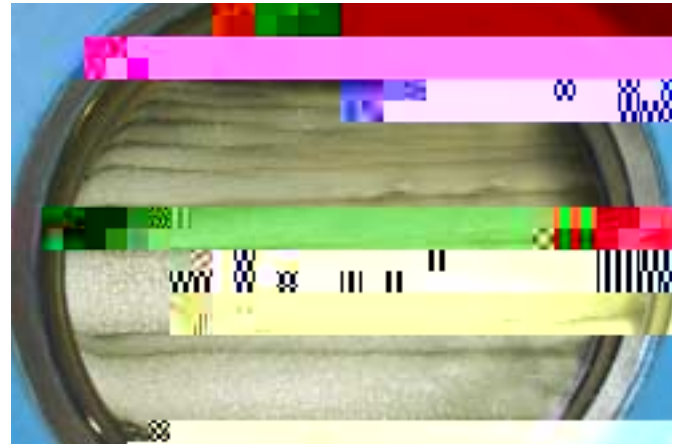
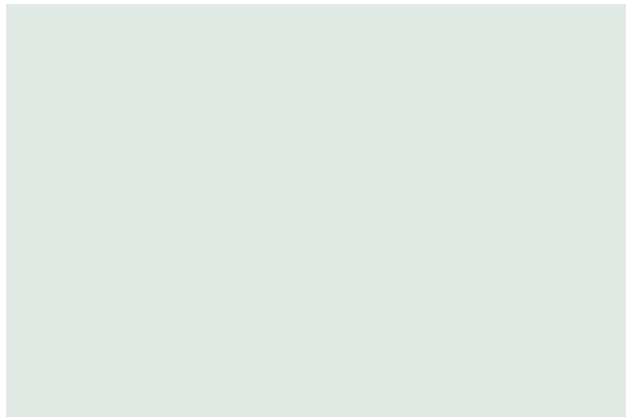


ECOfreeze Vacuum System

An Improved Way to Eliminate
Process Vapors



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Comparison of ECOfreeze Condensation versus Conventional Ejector System

Application

75,000 lb/hr edible oil deodorizer operating at 1.5 torr

Load from the Fatty Acid Scrubber

1,000 lb/hr stripping steam

20 lb/hr air

7 lb/hr FFA

1.25 torr at 160°F to vacuum system

ECOfreeze Condenser Vacuum System

Utilities

| | |
|--------------------------------|-------------|
| Motive steam (200 psig D&S) | 1,100 lb/hr |
| Water (87°F) | 125 gpm |
| Cooling fluid (liquid ammonia) | 2,200 lb/hr |

ECOfreeze Advantages

- Substantially lower consumption of high pressure motive steam, 1,100 pph versus 10,000 pph.
- The caustic flush system used in a conventional ejector system is eliminated. 15 gpm NaOH solution is eliminated and so is the chemical treatment with H₂SO₄.
- Cooling water is dramatically reduced, 125 gpm versus 2,000 gpm.

Graham engineers analyze
your specific vacuum and
heat transfer requirements to
maximize the efficiency and
performance of your process.

Because it's not just about
engineering products, it's about

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