

Stop Venting Profits. Start Recovering Waste Heat.

Purpose-Built Thermal Energy Recovery for Industrial Laundry and Linen Operations

The Industry Challenge

- ▶ Industrial laundries are among the most energy-intensive manufacturing and commercial operations — dryers, tunnel washers, ironers, and finishing equipment exhaust massive volumes of heated air directly to the atmosphere.
- ▶ Natural gas typically represents **30–50% of total operating costs** in large-scale laundry plants.
- ▶ Lint-laden, humid, and particulate-heavy exhaust streams defeat traditional heat recovery systems — causing fouling, clogging, downtime, and maintenance headaches.
- ▶ Rising energy costs and increasing ESG/sustainability demands from institutional customers are compressing margins.

The ThermStar System™ Solution

- ▶ The **ThermStar System™** is a closed-loop thermal energy recovery platform engineered specifically for lint and moisture-laden industrial laundry exhaust streams where conventional heat recovery technologies have historically struggled. The system recovers thermal energy from dryer exhaust, tunnel washer vents, and ironer/finisher stacks and delivers it where it creates the greatest operational value. Implemented and proven applications include preheating tumble dryer inlet air and preheating process water.
- ▶ **ThermStar System™ integrates proven Lepido® heat recovery technology** from Enjay Systems into a complete thermal energy recovery platform including system and controls integration providing long-term performance optimization.
- ▶ **Patented Particle Repellant Geometry (PRG)** combines staggered tubular geometry, engineered airflow pathways and finless heat transfer surfaces designed to reduce particle adhesion while maintaining long-term thermal performance.

Global Proven Performance

Up to 63% Reduction in Natural Gas Consumption in Laundry	<3 yr Typical ROI Payback	200+ Global Installations since 2021	99.9% System Uptime	8 International Awards Across 6 Countries	24/7 Industrial Production Environments
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Why ThermStar™ for Industrial Laundry

● Built for Dirty Air PRG technology thrives where lint, fibers, and humidity clog conventional heat exchangers. Maintains stable differential pressure over time.	● Engineered for Continuous Production Designed for the relentless duty cycles of multi-shift laundry plants. Minimal maintenance requirements.
● Measurable Sustainability Impact Directly reduces Scope 1 CO₂ emissions. Supports ESG reporting, TRSA sustainability benchmarks, and customer sustainability requirements.	● Lifecycle Support From heat recovery application assessment through commissioning to performance monitoring and optimization, ThermStar supports customers throughout the project lifecycle.

Applications Spotlight

Clothing	Whether it's lab coats, maintenance uniforms or hospital wear the system delivers savings	Linens	Fine linen or plush towels, the lint and fibers will not affect the thermal performance.
Floor Mats	Any particles flowing from floor mats will mainly flow through the Lepido without affecting the heat recovery process and savings.		

"Every BTU vented to the atmosphere is margin lost. ThermStar™ puts it back to work."

★ Case Study Spotlight — CWS Industrial Laundry

After installing the heat recovery system on their tunnel dryer exhaust, CWS achieved a **63% reduction in natural gas consumption** delivering over \$51,000 in **annual energy savings** and reducing their environmental footprint by 95 MT of CO₂ per year.

Schedule Your Free Energy Recovery Assessment

Norrel™ Inc dba ThermStar System™

Toll Free: 1-833-667-7359 | Email: info@thermstar.com | Web: thermstar.com

DIRTY AIR. CLEAN ENERGY.



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