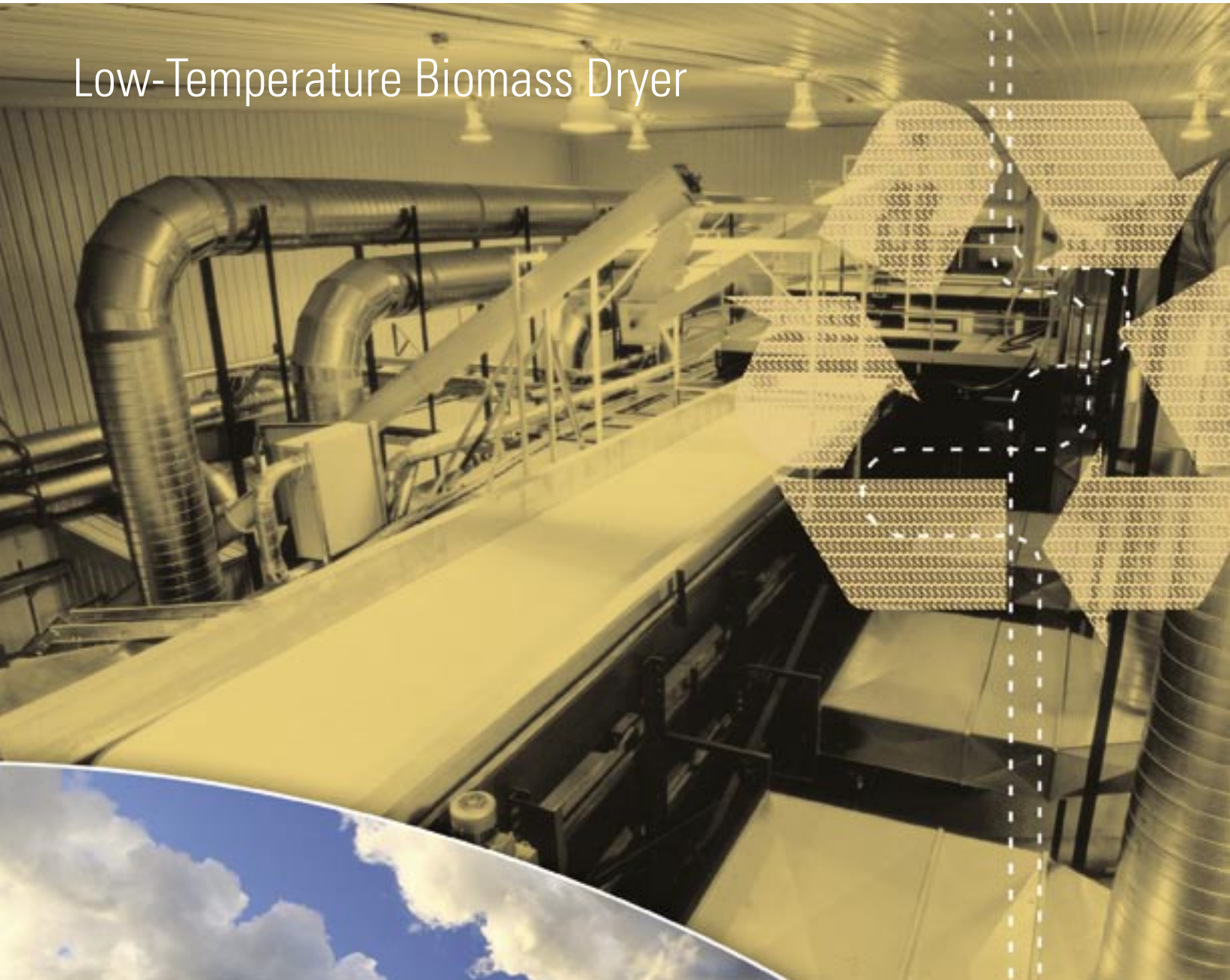


An Innovative Technology Company Providing
Custom Energy and Emission Reduction Solutions



DRY-REX™

Low-Temperature Biomass Dryer



Thermal Energy does much more than supply award-winning biomass dryers. With our skills and expertise in heat recovery we provide completely integrated bioenergy solutions that yield returns and long term results to your bottom line.

Let DRY-REX™ Fuel Your Profits

Bioenergy from biomass with DRY-REX™

- ▶ Increase biomass dryness to 65% or higher;
- ▶ Increase heating value of your biomass;
- ▶ Reduce boiler combustion air requirements;
- ▶ Improve boiler combustion efficiency by 20% or more;
- ▶ Increase biomass combustion rates by up to 30%;
- ▶ Reduce or eliminate supplementary non-renewable fossil fuel combustion;
- ▶ Reduce greenhouse gas emissions.

Bioenergy from Residuals (Sludge) with DRY-REX™:

- ▶ Convert waste such as sludge into valuable, high-yield biofuels,
- ▶ Replace or displace costly fossil fuels (oil, gas, etc) with dried residuals;
- ▶ Eliminate environmental impact of landfilling your waste;
- ▶ Eliminate related environmental costs:
 - Transportation;
 - landfill remediation, opening, closing & maintenance costs;
 - long term environmental liabilities.
 - Eliminate landfill emissions.

DRY-REX™ – Creates free energy from your existing processes and waste

DRY-REX™ Features

Simple Durable Design

Stacked, modular belt conveyor design allows for greater air contact and increased residence time for a given equipment footprint. Low operating speeds and durable components ensure long equipment life.

Low Emissions

Low operating temperatures minimize the amount of volatile organic compounds (VOCs) generated from biomass. Low air velocities and the fixed bed design minimize particulate carry over in the exhaust minimizing investments required to meet emission regulations.

Safe and Reliable Operation

Low operating temperatures greatly reduce safety hazards. Ambient air designs allow for safe working environments and reduces dust formation.

Low Operating Cost

Low operating temperatures means we can provide an integrated solution using recovered energy from your process. Evaporate moisture for 50-75 kWe/ton.

Commonly used Waste Heat Sources for DRY-REX™

- ▶ Biomass Boiler Exhaust
- ▶ Recovery Boiler Exhaust
- ▶ Smelt Dissolving Tank Exhaust
- ▶ Pulp Dryer Exhaust
- ▶ Paper Machine Dryer Exhaust
- ▶ Hot Effluent Streams
- ▶ Low-Pressure Steam



A DRY-REX™ system installed at a Western Canadian paper mill is used to dry sludge produced in the paper making process and convert it into a commercial, marketable product. The mill gets the benefit of converting a biowaste product which cost millions of dollars to transport and landfill into a revenue-generating product line.

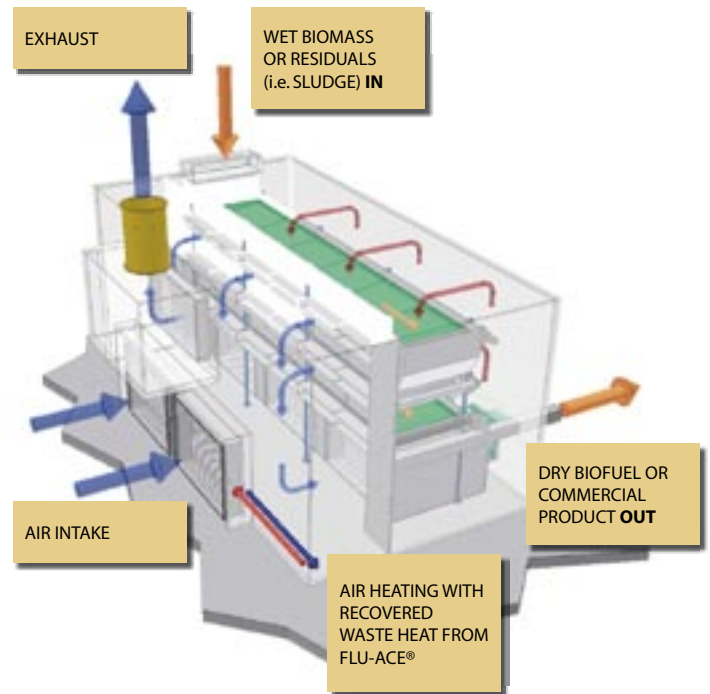
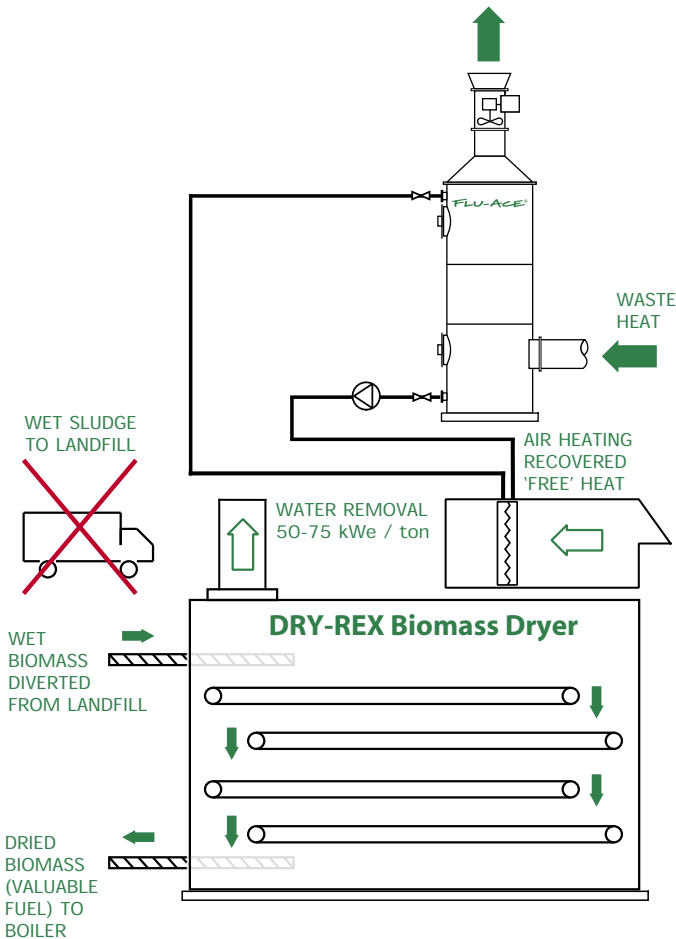
As an integrated solution with our FLU-ACE® energy recovery, the DRY-REX™ delivers an optimum return allowing recovered waste energy from your processes to supply DRY-REX™ heating systems as well as displace expensive process steam heating.

DRY-REX™ provides significant benefits and improvements in boiler and plant operations. In cases where biomass is already in use as a fuel source, DRY-REX™ can completely eliminate the need to use expensive non-renewable fossil fuels

Using the DRY-REX™ system also means:

- ▶ Tons of water removed can now be replaced with more biofuels to displace non-renewable fossil fuels or increase steam production;
- ▶ Energy previously used to evaporate water now instead produces valuable steam;
- ▶ Significant reduction in combustion air requirements;
- ▶ Boilers topped in capacity can produce much more steam;
- ▶ More biomass can be fed to the same boiler increasing steam generation;
- ▶ Improved combustion efficiency;
- ▶ Considerable stabilization of boiler operations.

Some of the biggest benefits from DRY-REX™ land right on your bottom line – reduced production costs, sharply lower energy costs, increased profitability, reduced environmental impact and more. DRY-REX™ also optimizes your production of green power and with reduced greenhouse gas and other emissions opening access to a source of certifiable CO2 and other emission trading credits.



DRY-REX Biomass Dryer

Thermal Energy: Supplying Innovative Award-Winning Energy Recovery, Conservation, Bioenergy and Emission Reduction Solutions.

TEI is a full service, design-build firm with engineering accreditation, established in 1986. We have designed and built many energy and emission reduction solutions on a design-build basis for our customers.

Our team of professionals is highly experienced in plant and process energy efficiency evaluations & innovative solution development. We conceptualize, design, manufacture and deliver custom solutions which reduce your energy costs, improve energy efficiency and reduce the environmental impact of your facility.

We pride ourselves on working with customers to gain an in-depth understanding of their business, corporate, social and fiscal challenges. With this sound footing, our team of professionals provides complete solutions from initial design concept to installation, to financing and servicing of varied technology solutions.

Typical applications include:

- ▶ Waste energy recovery (FLU-ACE® and other);
- ▶ Biomass and Waste stream Drying solutions (DRY-REX™ and Other)
- ▶ Steam & Condensate System Solutions (GEM® and Other)
- ▶ Ozone systems (THERMALOZOMAX™), and;
- ▶ Burner/Boiler System Improvements.

STOP delaying energy cost reduction programs and START saving on your company's energy bill today with DRY-REX™.

Let us put our experience to work for you. Contact TEI for installation case studies on DRY-REX™ winning solutions, or for a review and feasibility analysis for your company.

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