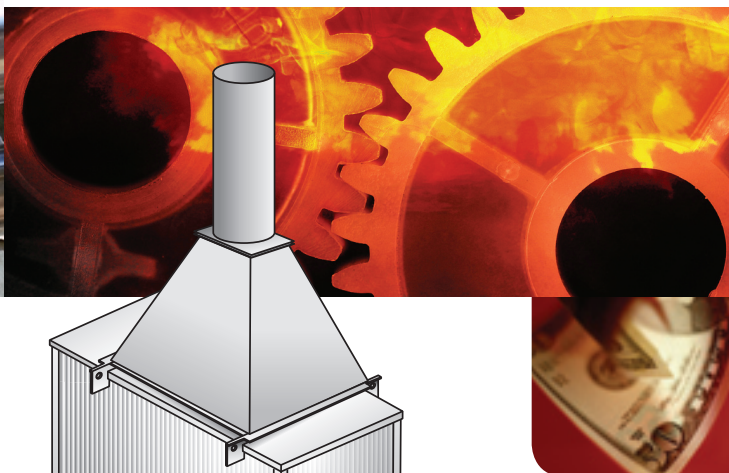


CUSTOM-ENGINEERED

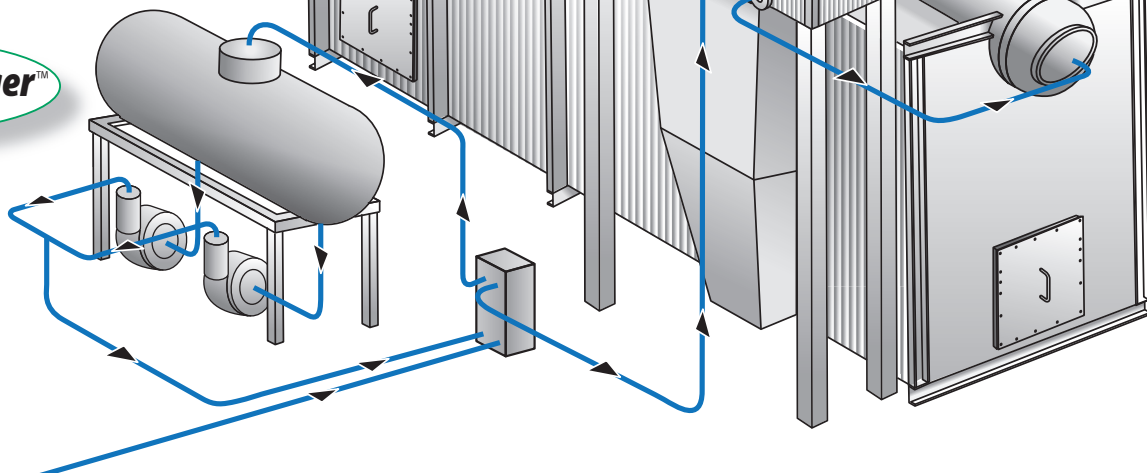


ThermoCharger™ System

- Improves boiler efficiency by up to 3%
- Typical installed payback of less than one year



E-Tech's progressive engineering approach shows in constant refinements that help you squeeze more than ever from your energy dollar. Case in point: Our patent-pending **ThermoCharger System** allows you to cool makeup feedwater and improve economizer performance by up to 3%.



The innovative way to get even more from your energy dollar.

E-Tech ThermoCharger System

In a traditional boiler system, feedwater is supplied from the deaerator to the boiler through an economizer. Although feedwater temperature may vary, a typical value is 225-230°F.

On most natural gas-fired applications, a flue gas outlet temperature of 300°F is the norm due to the inlet feedwater temperature and the need to keep the economizer to a manageable size.

However, in certain applications that use a relatively high amount of makeup water, E-Tech is able to cool the deaerated feedwater with a secondary heat exchanger, which results in further cooling of flue gases.

This system allows us to increase boiler efficiencies by up to 3% in most cases, saving additional energy dollars with a quick return on investment.



	Traditional Economizer	ThermoCharger System
Gas Flow	54,000	54,000
Gas In	500	500
Gas Out	300	220
Gas Cp	.27	.27
Q (mmBtu/hr)	2.916	4.082
Fuel saved per year = $\frac{Q \times \text{hours of operation} \times \text{fuel cost}}{\text{Boiler efficiency}}$		
Savings with traditional economizer:		\$216,875
with ThermoCharger System:		\$303,600
Increased savings per year:		\$86,275

GREENENGINEERING at work

A 50,000 pph boiler fires natural gas at **\$8.50** per mcft and operates **7,000** hours per year. The boiler has a traditional economizer; gas exiting the unit is 300°F.

Using the E-Tech ThermoCharger System, we are able to install a larger economizer that reduces the gas temperature to 220°F. This results in an additional 2% efficiency gain in the boiler.



At E-Tech, we've been engineering precise custom solutions for our customers' waste heat recovery needs for more than 30 years, producing literally thousands of designs for virtually every type of application.

To ensure that finished products reflect our exacting standards, we contract with hand-picked,

exclusive subcontractors we know we can rely upon to maintain our exacting specifications and standards throughout manufacturing, inspection and shipment.

This thorough process ensures that whether you purchase a single component or a complete system, your E-Tech waste heat recovery equipment will meet your needs effectively and reliably for years to come.

918-665-1930 | www.e-techinc.com

Our difference is GREENENGINEERING™.

E-Tech heat recovery solutions produce efficiencies of up to 95% from your fuel dollar while reducing pollutants in your exhaust. And we're constantly moving forward with new ideas to serve more industries with greater efficiency. So "green" is what your company saves ... and how it behaves.