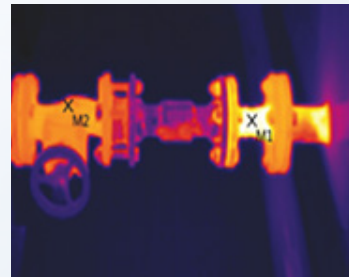


ENEROP

Process Energy Optimisation

Energy Recovery **PERFECTED**

Applying cutting edge technology
to save you money



How we can save you money

We offer a range of technologies which improve process performance, reduce energy consumption and ease maintenance. Typical systems save between 10% and 25% of energy costs.

"I have been delighted with both the low maintenance steam traps and the condensing heat recovery systems installed on our site and would strongly urge anyone else to consider these technologies".

Production Manager – Major Food Manufacturer.

Condensing Heat Recovery

Recovering waste energy, offsetting the use of carbon fuels and reducing CO2 emissions.

Condex Condensing economizer systems

- Recovering most of the remaining energy in your exhaust stack to use instead of burning more fuel.
- Generating water from the air that can be used in the boiler or on site.
- Reducing operational costs and improving the bottom line

Modular Construction

The modular construction of the Condex system means that multiple heat exchangers can be contained in one unit providing optimum heat recovery and delivery to suit your site. Maximum recovery, minimum fuss.

Innovative Solutions

High energy recovery from the existing stack means low temperatures and different materials for our stacks, this one is made from fibreglass. Innovative solutions driving great projects.

Optimised for Energy Efficiency

Getting every last kWh of energy from your fuel is where the Condex condensing economizer

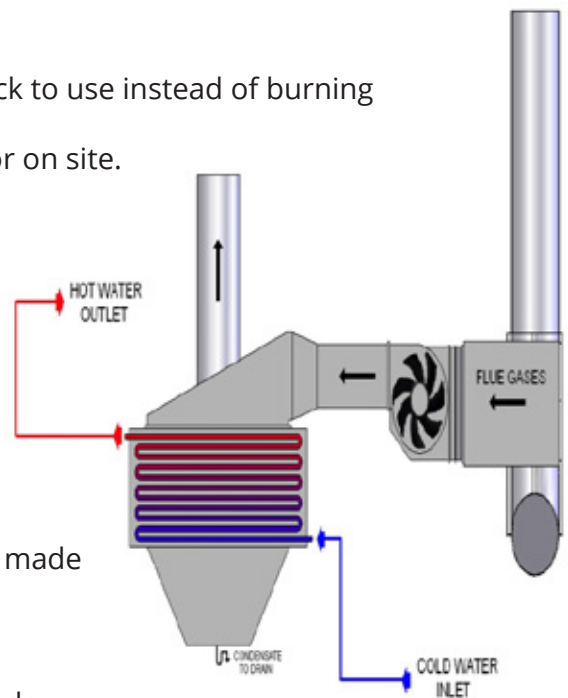
design starts. Converting both latent and sensible energy from the process or boiler exhaust provides large amounts of energy that can be used in the boiler house or across your site to offset regular fuel costs.

Engineered for excellence

Condensing exhaust gasses recovers the large amount of latent heat trapped in the exhaust gas as it exits the boiler or process and it is the release of this energy that provides such high levels of energy reduction.

Designed to save a fortune

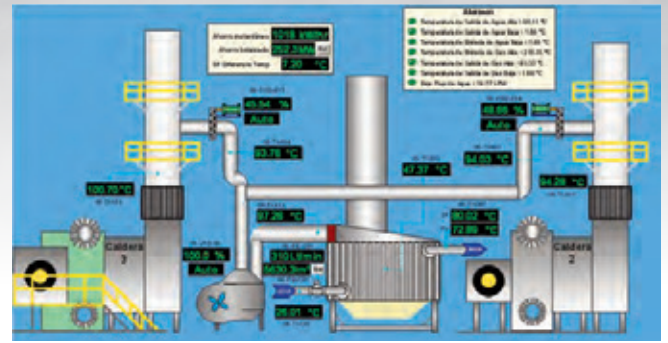
Each Condex system is designed and configured specifically for the site it works on, matching energy sources with site requirements to achieve the optimum in energy reduction and efficiency. offsetting the use of carbon fuels and reducing CO2 and NOx



The Technology Explained

Energy Recovery

The hot water, generated from recovering both the latent and sensible heat in the exhaust, is then used to pre-heat hot water users on site. The simplest systems can use this heat to pre-heat boiler make-up water, offset steam use to the deareator and increase boiler feed water temperatures and that's before any other users are considered outside the boiler house.



The Process

Condex techHot exhaust gas is sucked from the existing site flue or flues and into the condensing heat exchanger. Cooler water in one or more streams is then passed through the heat exchanger tubes transferring heat to the water and removing heat from the exhaust.

The Condex design of economiser combines both sensible and latent heat recovery making it hugely more efficient than most economisers. Most economisers are designed to only recover the sensible heat which generally only equates to between 4 and 6 percent of the energy consumed. The Condex design however enables the collection of energy below the dew point. This means that all the latent energy released during the



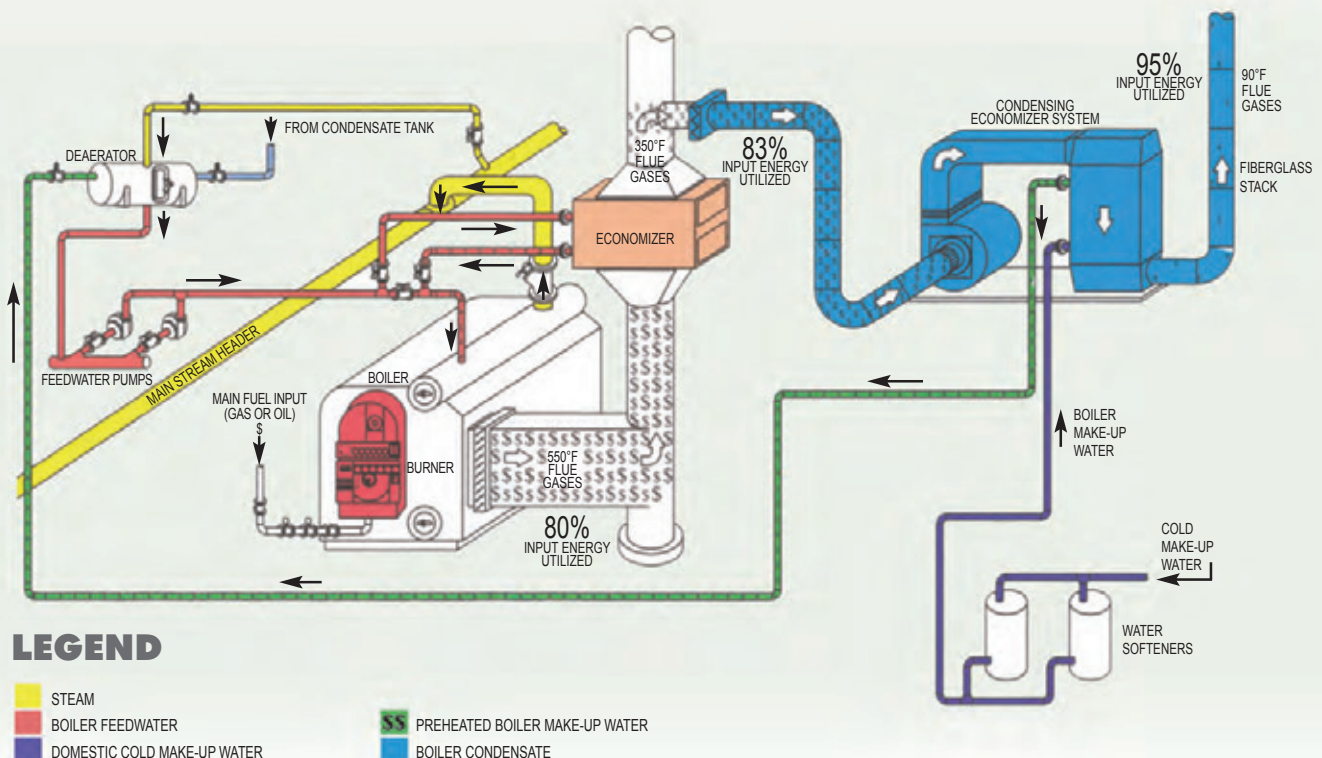
condensing phase of cooling is also captured raising the potential energy recovered to over 10 percent and often to between 15 and 20 percent of the total energy consumed. A 20 percent energy saving to your fuel bill will really give you something to smile about.

Green House Gasses (GHG's) are also reduced in large proportion, in part due to the increase in energy efficiency, but also due to the condensing nature of the economiser, reducing both CO₂ and NO_x.

Engineering the Condex condensing economiser to be custom built and ready for shipping, provides for simple installation leaving only pipework, ducting and local electrical connections to be made once on site.



95% EFFICIENT BOILER OPERATION



Case Study - William Osler Hospital

A Dual staged ConDex System supplied to William Osler Hospital separately heats both boiler make up water and domestic hot water for the hospital. The make up water is heated from 7° C up to 88° C and the domestic water is heated from 9° C up to 60° C. Overall the ConDex economizer recovers 1,512 kW/hr on average with peaks of over 2,000 kW/hr.

<i>Annual average fuel cost savings:</i>	<i>£368,000</i>
<i>Annual CO2 emission reductions:</i>	<i>3,209 tons</i>
<i>Annual NOx emission reductions:</i>	<i>2.11 tons</i>
<i>Payback:</i>	<i>Less than 8 months</i>
<i>Payback calculated on a fuel cost of £0.23 / m3</i>	

Case Study - University of Guelph

The ConDex condensing economizer supplied recovers waste heat from boiler exhaust and provides heat for the campus district heating loop and boiler make up water. The ConDex heats the district-heating loop up to 88° C and heats boiler make up water from 15° C to 90° C. The system recovers and reapplies over 1,760 kW/hr.

<i>Annual average fuel cost savings:</i>	<i>£410,000</i>
<i>Annual CO2 emission reductions:</i>	<i>3,432 tons</i>
<i>Annual NOx emission reductions:</i>	<i>2.25 tons</i>
<i>Payback:</i>	<i>Less than 1 year</i>
<i>Payback calculated on a fuel cost of £0.23 / m3</i>	



Case Study - Pacific Gas & Electric - Central Steam Plant

The ConDex condensing economizer was utilized to heat boiler make up water from 12° C up to 86° C. The ConDex recovers energy from multiple boilers exhaust gas, after existing economizers, saving a further 2,286 kW/hr on average, with peaks of over 2,900 kW/hr.

<i>Annual average fuel cost savings:</i>	<i>£534,000</i>
<i>Annual CO2 emission reductions:</i>	<i>4,592 tons</i>
<i>Annual NOx emission reductions:</i>	<i>3.0 tons</i>
<i>Payback:</i>	<i>Less than 1 year</i>
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FenixEarth
Hydro-dynamic Steam Traps