

# The Ljungström® Air Preheater

The Ljungström® Air Preheater is more widely used than any other type of heat exchanger for comparable service.

Proven performance and reliability, effective leakage control, and its adaptability to most any fuel-burning process, are the bases for the Ljungström® Air Preheater being the accepted worldwide standard.

It is both designed and built to operate over extended periods with durable, uninterrupted service. Simplicity of design also makes it easy and economical to maintain while in operation and at scheduled outages.

## Application Versatility

Available in a broad range of sizes, arrangements, and materials, Ljungström® Air Preheaters are custom-engineered to meet specific requirements and operating conditions of a variety of applications:

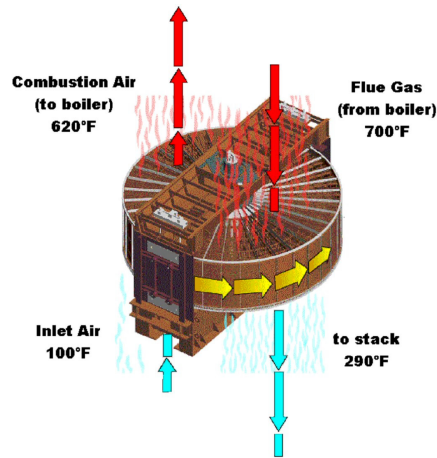
- Electric power generating plants
- Fluidized bed and marine boilers
- Package & large industrial boilers
- Hydrocarbon & chemical processes
- Waste incinerators & drying systems
- Flue gas & other reheating systems

## Heat Recovery Cycle

The basic component of the Ljungström® Air Preheater is a continuously rotating cylinder, called the rotor, that is packed with thousands of square feet of specially formed sheets of heat transfer surface.

As the rotor revolves, waste heat is absorbed from the hot exhaust gas passing through one half of the structure.

This accumulated heat is released to the incoming air as the same surfaces pass through the other half of the structure. The heat transfer cycle is continuous as the surfaces are alternately exposed to the outgoing gas and incoming air streams.



## The Energy Conservor

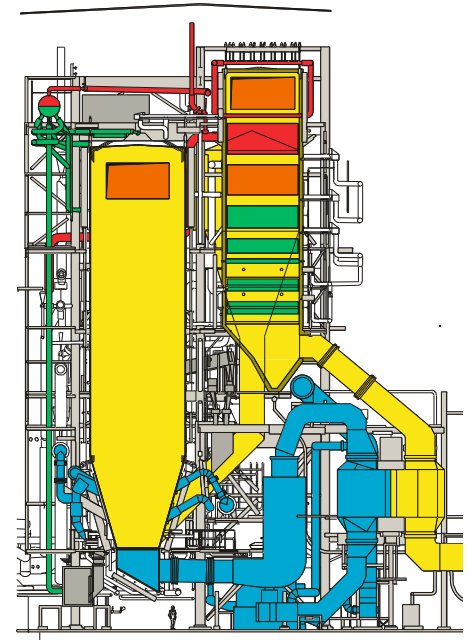
For fossil fuel-fired power generators and industrial processes, the recovery of waste heat energy has proven to be one of the most effective ways to conserve fuel and lower operating costs.

Fuel savings with the Ljungström® Air Preheater are about 1-1½% for every 40°F to 50°F increase in combustion air temperature, depending on the application.

Ljungström® Air Preheaters not only provide the highest fuel saving efficiency that is available, but their simplified design and operating integrity assure continuous reliable service throughout the life of your plant.

Heat energy is captured and transferred to incoming air for combustion before it is lost to the stack. The result is a substantial saving in fuel that would otherwise be required to bring the air up to combustion temperature.

To further illustrate the Ljungström® Air Preheaters ability to save fuel, two 750MW coal fired boilers equipped with Ljungström® Air Preheaters can save about 42 car-loads of coal every day.



A sectional view of a steam generator at a typical power plant. It shows the path of the air and gas streams through the Ljungström® Air Preheater.

# ALSTOM

**Power Environment**  
Air Preheater Company