

Heat Exchanger



A **heat exchanger** is a device that allows heat from a fluid (a liquid or a gas) to pass to a second fluid (another liquid or gas) *without the two fluids having to mix together or come into direct contact*. If that's not completely clear, consider this. In theory, we could get the heat from the gas jets just by throwing cold water onto them, but then the flames would go out! The essential principle of a heat exchanger is that it transfers the heat without transferring the fluid that carries the heat.

Have you ever watched wisps of smoke drifting from smokestacks and wondered how much energy they're uselessly pumping into the air? Maybe less than you might think! Saving energy is a huge and costly problem for factory bosses and it's one reason they often install devices called **heat exchangers** to salvage as much heat as possible from waste gases.