

WASTE HEAT RECOVERY UNITS

WASTE HEAT BOILERS | SUPERHEATERS | HOT WATER HEATERS | AIR & GAS PREHEATERS | THERMAL OIL HEATERS

ZEECO®

A Waste Heat Recovery Unit (WHRU) is a heat exchanger in a waste heat stream, designed to capture and repurpose the thermal energy that would otherwise be lost to the atmosphere. The WHRU can be coupled with one of Zeeco's incinerators or behind an exhaust stream from a Sulfur Recovery Unit (SRU), gas turbine, diesel genset, Fluid Catalytic Cracking Unit (FCCU), etc. The recovered heat then serves multiple applications, such as preheating air for your combustion application to producing steam for power generation or other plant utilities, and even heating thermal fluids to transport that heat where you need it.

As ASME Stamp holders, Zeeco provides end-to-end, single-source solutions for even the most complex heat recovery applications.

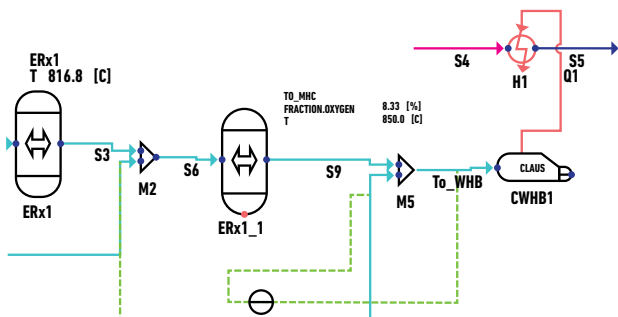
SOLUTIONS

Zeeco offers industry-leading solutions in waste heat recovery, such as:

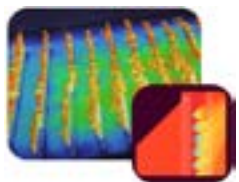
- Waste Heat Boilers
- Hot Water Heaters
- Air & Gas Preheaters
- Superheaters
- Thermal Oil Heaters
- Hands-on Training

DESIGNS THAT DELIVER

ZEECO WHRU solutions are powered by the latest advancements in engineering technology.



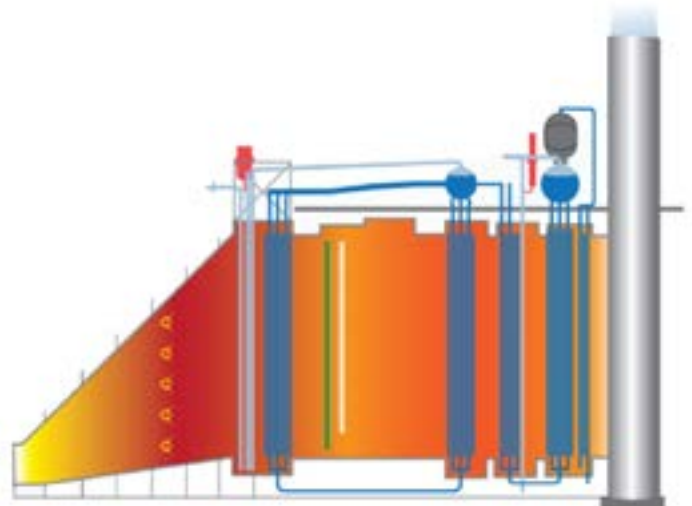
Process Modeling



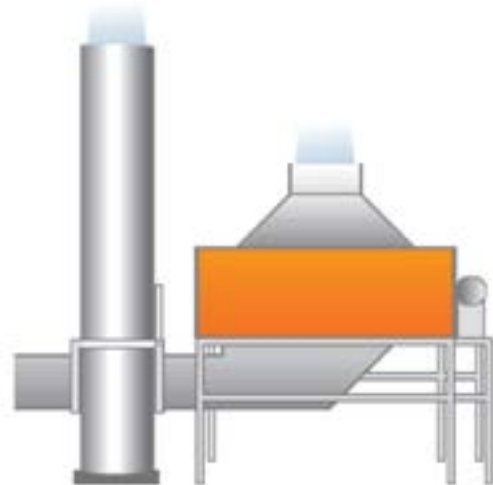
CFD & Thermal Modeling



Finite Element Analysis



Multi-stage Waste Heat Recovery Boiler (WHRB)



Waste Heat Recovery Unit with Bypass



ZEECO Waste Heat Recovery Boiler

ZEECO.COM

WASTE HEAT RECOVERY SOLUTIONS

TYPE	MAX DESIGN PRESSURE	MAX DESIGN STEAM CAPACITY	MAX DESIGN STEAM TEMPERATURE	APPLICATION
WHRBs	<1,800 psig (124 barg)	<450,000 lb/hr (204,000 kg/hr)	< 1,100 F (593 C)	For use with general heat recovery for furnaces, incinerators, and other process heaters
HEAT EXCHANGERS	Wide range of pressures, temperatures, and flow rates			Capable of heating water, air, steam, gas, and a large variety of thermal oils

ANCILLARY EQUIPMENT

Zeeco can supply all ancillary equipment for your WHRU needs

- › Exhaust Stack
- › Transition Ducts
- › Controls
- › CO & NO_x Reduction
- › Support Structure
- › Instrumentation
- › Dampers

TYPICAL WHRU APPLICATIONS

- › Offshore, FPSOs
- › Online Terminals
- › Combined Cycle Plants
- › Manufacturing Processes
- › Food and Beverage
- › Sulfuric Acid Plants
- › Carbon Black Plants
- › Chemical Plants
- › Refineries
- › Fluid Catalytic Cracking Units
- › Power Generation
- › Cement and Glass
- › Hospitals
- › Environmental Control
- › District Heating
- › Pulp and Paper Mills
- › Data Centers

ZEECO'S INSTALLATION CAPABILITIES

- › Turnkey Equipment Installations
- › Equipment Lifting and Setting
- › On-site Welding
- › Civil Foundation Design and Installation
- › Mechanical and Electrical Installation
- › Commissioning



Support Structure



Transition Duct



Exhaust Stack

UNLOCK YOUR PAYBACK

ZEECO WHRUs can lower fuel costs, boost overall system efficiencies, and reduce carbon footprint.

Ask us for a complimentary payback analysis to see how your investment in waste heat recovery pays for itself.

ZEECO®

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Choose to work with our dedicated, flexible, and innovative team, and you won't be disappointed. Call or email us today to request a quote or to learn more about our proprietary combustion systems.