

POWERVEX[®] HEAT EXCHANGERS

TURNING EXHAUST INTO AN ENERGY ASSET

POWERED BY ENERVEX EXHAUST AND CONTROLS EXPERTISE.



HIGH-EFFICIENCY AIR-TO-WATER
HEAT RECOVERY ENGINEERED FOR
INDUSTRIAL, COMMERCIAL, AND
MISSION-CRITICAL APPLICATIONS

Simple. Seamless. Smart.

ENERVEX[®] 
VENTING DESIGN SOLUTIONS

WASTE HEAT IS NO LONGER WASTE

Across industrial plants, process facilities, boiler rooms, and mission critical facilities, up to **20–50% of consumed energy exits the building through exhaust streams.** PowerVex® heat exchangers are designed to intercept that loss and convert it into usable hot water—reducing fuel consumption, stabilizing system performance, and accelerating decarbonization strategies.

Unlike traditional economizers, PowerVex® systems leverage **modular hybrid micro-channel and plate heat exchanger technology, delivering 200–300% greater energy recovery per square foot** while remaining compact, serviceable, and retrofit-ready.

THE POWER OF INTEGRATION DESIGNED FOR THE ENTIRE EXHAUST ECOSYSTEM

PowerVex® heat exchangers do not operate in isolation. They are engineered to integrate seamlessly with ENERVEX's PowerStack® chimney systems and modulating exhaust solutions, ensuring:

- **STABLE DRAFT UNDER ALL OPERATING CONDITIONS**
- **CONTROLLED EXHAUST VELOCITY AND PRESSURE**
- **PROTECTION AGAINST CONDENSATION, FOULING, AND THERMAL STRESS**
- **OPTIMIZED HEAT RECOVERY WITHOUT COMPROMISING APPLIANCE PERFORMANCE**

By pairing PowerVex® heat exchangers with ENERVEX exhaust fans and PowerStack® exhaust stacks, system designers gain full-stack control—from appliance outlet to recovered energy delivery.

This system-level approach reduces risk, simplifies commissioning, and protects user-up time.



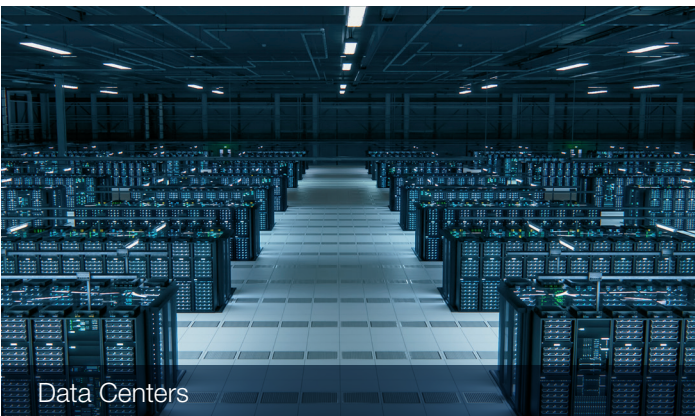
ENGINEERED FOR HIGH-DEMAND COMMERCIAL & INDUSTRIAL APPLICATIONS



Commercial and industrial process ovens



Hospitals and laboratories



Data Centers



Commercial Boiler Plants



Food & beverage processing



Industrial manufacturing



Breweries and distilleries

Wherever exhaust exists, PowerVex
converts it into measurable ROI—often with

**payback periods
under two years.**

THE POWERVEX® PRODUCT LINE

ENERVEX offers a comprehensive line of heat recovery systems that are customized for specific applications.

PowerVex® UCX

High-temperature plate economizers capable of handling exhaust temperatures up to 1,400°F (760°C). Ideal for industrial processes requiring compact footprints with extreme thermal resilience.



PowerVex® VHX Series

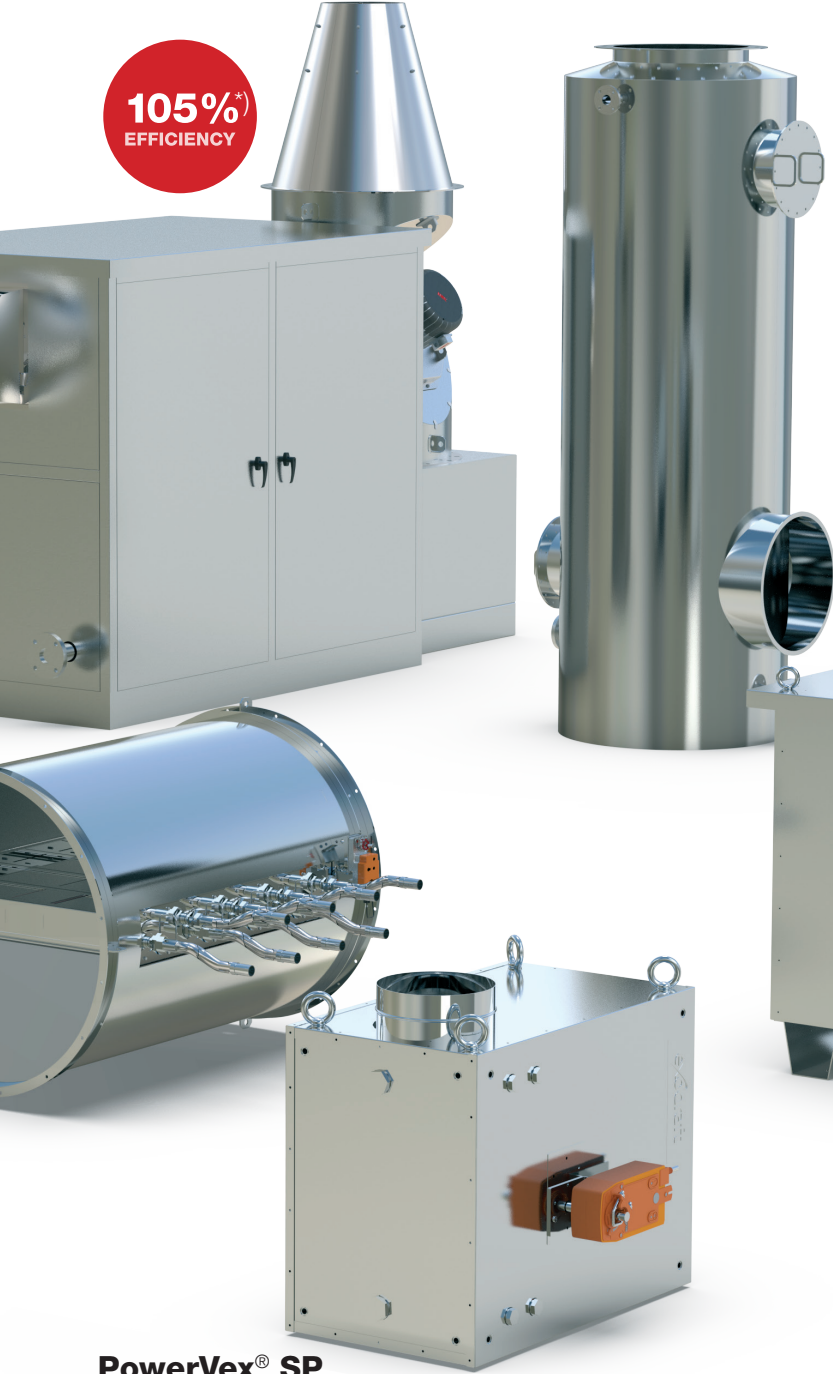
Inline, modular air-to-water heat exchangers for single or multiple boilers, ovens, and process exhausts. Available in single-row and double-row configurations for condensing or non-condensing operation. Designed for maximum efficiency with minimal pressure drop.

ONE PLATFORM. MULTIPLE APPLICATIONS.

PowerVex® IHX

Inline air-to-water plate heat exchanger with 100% bypass for single boilers, ovens, and small process exhaust systems. Designed for maximum efficiency with minimal pressure drop.

105%*
EFFICIENCY



PowerVex® SP

Inline air-to-water plate heat exchanger with 100% bypass for single boilers, ovens, and small process exhaust systems. Designed for maximum efficiency with minimal pressure drop.

PowerVex® DCX

Direct-contact and compact recovery solutions for high-temperature applications, condensing applications, humid exhaust, and large industrial processes.



PowerVex® RHX

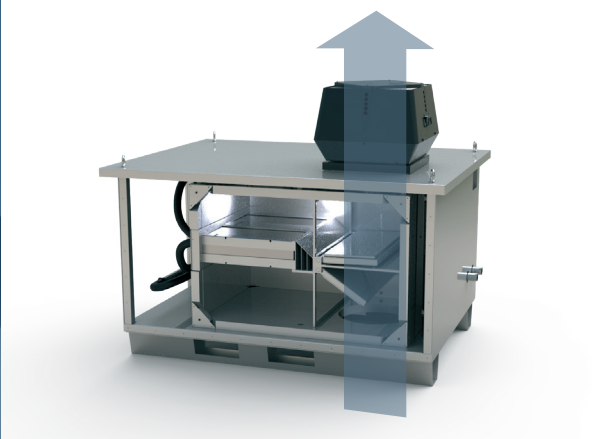
A fully turnkey rooftop waste heat recovery system that integrates heat exchangers, circulation pumps, bypass dampers, exhaust fans, and controls into a single skid-mounted solution—installed with less than 30 minutes of production downtime.

RELIABILITY BY DESIGN

NO DOWNTIME. NO COMPROMISE.

Traditional heat recovery systems often introduce risk: fouling, corrosion, service shutdowns, and lost production.

POWERVEX® SYSTEMS ARE ENGINEERED TO ELIMINATE THOSE TRADEOFFS:



INTEGRATED BYPASS DAMPERS ALLOW FULL EXHAUST FLOW DURING SERVICE

In systems like the PowerVex® RHX, exhaust can bypass the exchanger entirely—ensuring continuous operation even during maintenance.



316L STAINLESS STEEL EXHAUST-WETTED SURFACES FOR LONG SERVICE LIFE

Superior resistance to corrosion and acidic condensate ensures long service life, reliable performance, and reduced maintenance.



MODULAR HEAT EXCHANGE SECTIONS FOR FAST MAINTENANCE

The modular designs make service and maintenance fast and easy.



SKID-MOUNTED AND ROOFTOP-READY DESIGNS FOR RETROFIT ENVIRONMENTS

For critical applications where minimum down-time is critical.

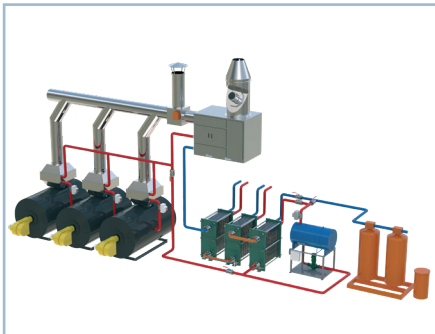
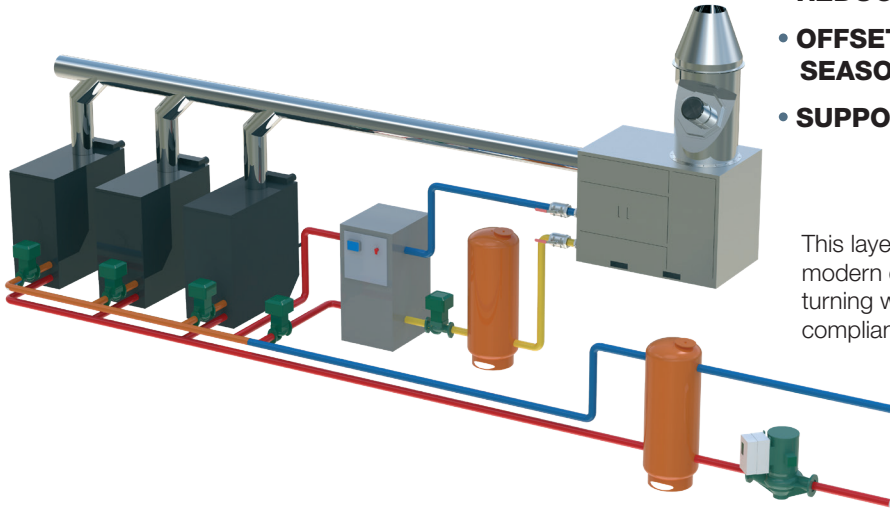
ELECTRIFICATION & HEAT PUMP ENABLEMENT MULTIPLYING THE VALUE OF RECOVERED HEAT

PowerVex® heat exchangers are frequently deployed upstream of ENERVEX HCU Heat Conversion Units, which combine recovered heat with integrated heat pumps to deliver 100%+ system efficiencies.

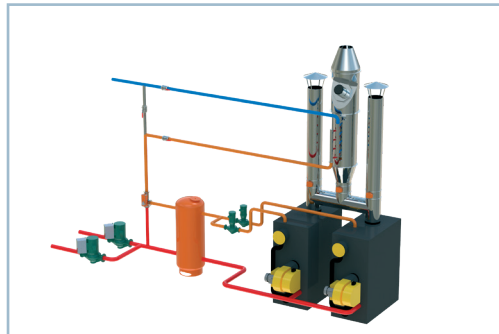
Recovered heat can be used to:

- **PREHEAT DOMESTIC HOT WATER**
- **REDUCE HEAT PUMP LIFT AND IMPROVE COP**
- **OFFSET BOILER RUNTIME DURING SHOULDER SEASONS**
- **SUPPORT MIXED-SOURCE HEATING STRATEGIES**

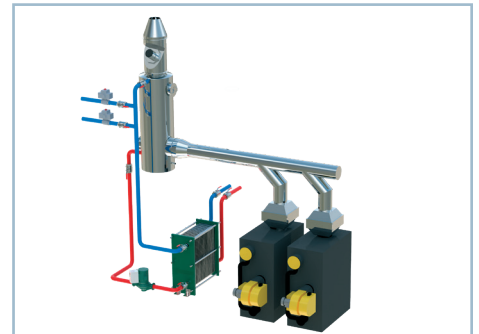
This layered approach aligns directly with modern electrification and ESG frameworks, turning waste heat into a strategic compliance lever.



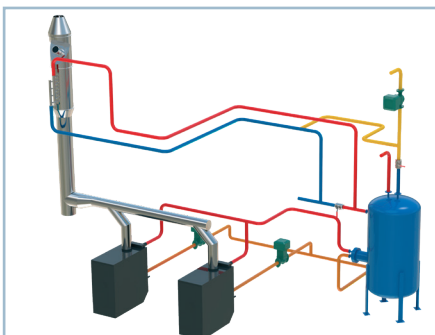
Hospital or University power plants: Waste heat is used to pre-heat boiler make-up water, feedwater, domestic hot water, and the existing hydronic loop.



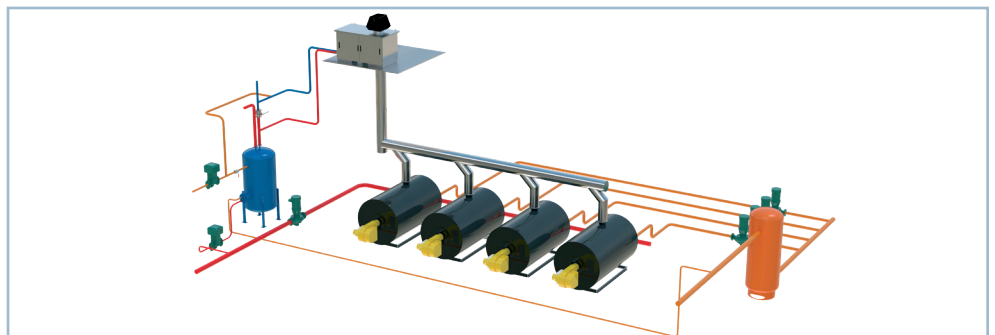
Hydronic boiler retrofit : Transforming standard efficiency boiler plant (180F/160F loop) to the same efficiency as condensing boilers by adding ENERVEX waste heat system (combined with an outdoor reset) in the stack and pre-heat the return loop prior to entering the boilers. (Saving huge amounts of capital costs by NOT replacing the boilers.)



Using direct contact technology, 100% of the waste heat from natural gas-, propane-, or oil-fired boilers can be recovered to heat large volumes of process or sanitation hot water at no additional cost.



Domestic hot water heater application: Using ENERVEX waste heat technology, the last 10%–20% of energy losses can be recovered by pre-heating the cold water before it enters the storage tank.



Turn-key roof top application: For critical downtime applications or when there is no space in the mechanical room, the RHX and IHX fully packaged systems can be applied to all types of waste heat recovery applications.

WHY ENERVEX. ENGINEERED CONFIDENCE

For more than 30 years, ENERVEX has specialized in mission-critical exhaust, draft control, and energy optimization systems. That expertise is embedded in every PowerVex® heat exchanger.

What sets ENERVEX apart:

DESIGN ASSISTANCE AND SYSTEM MODELING
INTEGRATED EXHAUST, HEAT RECOVERY, AND CONTROLS
PROVEN PERFORMANCE IN HIGH-RISK ENVIRONMENTS
LONG-TERM SERVICEABILITY AND LIFECYCLE SUPPORT

This is not component engineering—it is system stewardship.

TURN EXHAUST INTO OPPORTUNITY

If your facility disperse heat today, you are already paying for tomorrow's energy savings.

Let ENERVEX show you how PowerVex®, PowerStack®, and modulating exhaust systems can transform your exhaust into a competitive advantage.

CONTACT US NOW!

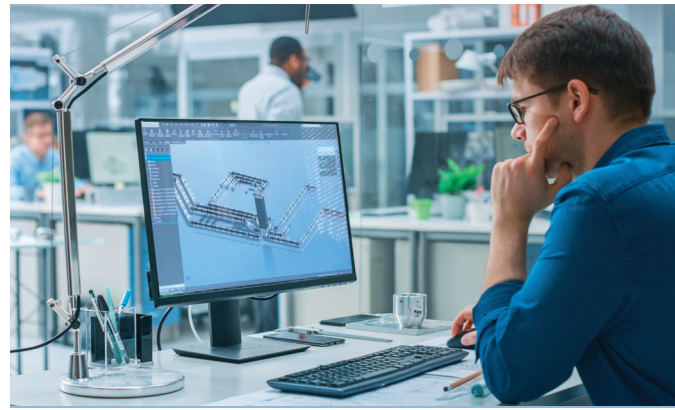
Find out how ENERVEX can assist you with your next project.

TOLL FREE: 800.255.2923
PHONE: 770.587.3238
SALES@ENERVEX.COM

– OR VISIT ENERVEX.COM

ENERVEX Inc.
1685 Bluegrass Lakes Pkwy.
Alpharetta, GA 30004
USA

P: 770.587.3238
F: 770.587.4731
T: 800.255.2923
info@enervex.com
www.enervex.com



ENERVEX® 
VENTING DESIGN SOLUTIONS