

Energy efficiency for engine & gas turbine power plants

Turn your power plant's exhaust gas waste heat into usable energy. Alfa Laval's modular HukkaPowerLoop solutions boost efficiency, cut emissions, and support sustainable, reliable operations — maximizing every kilowatt.



Increased power plant output

HukkaPowerLoop maximizes available power utilization by converting waste heat into valuable electricity. Instead of installing additional engines or gas turbines, you can boost your plant's output by implementing a combined cycle system.



Reduced CO₂ emissions

HukkaPowerLoop lowers fuel consumption, which directly translates to reduced CO₂ and other pollutant emissions. There are also equivalent savings in greenhouse gas emissions throughout the fuel supply chain.



Improved energy efficiency

Increase your power plant efficiency by harnessing free, untapped potential of the exhaust gases. HukkaPowerLoop utilizes waste heat and converts it into fuel-free capacity and improves overall plant economics.



Fast delivery and payback with high ROI

Benefit from quick returns on your investment and gain long-term savings. HukkaPowerLoop is standardized and modular, making it fast and economical to deploy. Each module is factory built and tested, ready for seamless integration.



This is Alfa Laval

The ability to make the most of what we have is more important than ever. Together with our customers, we're innovating the industries that society depends on and creating lasting positive impact. We're set on helping billions of people to get the energy, food, and clean water they need. And, at the same time, we're decarbonizing the marine fleet that's the backbone of global trade.

We pioneer technologies and solutions that free our customers to unlock the true potential of resources. As our customers' businesses grow stronger, the goal of a truly sustainable world edges closer. The company is committed to optimizing processes, creating responsible growth, and driving progress to support customers in achieving their business goals and sustainability targets.

Together, we're pioneering positive impact.

How to contact Alfa Laval

For waste heat recovery solutions for power plants, contact us directly at sales.rauma@alfalaval.com

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com

Your global partner

Alfa Laval is trusted worldwide for mission-critical thermal solutions. HukkaPowerLoop builds directly on our decades of field experience, not only in data centers but also in energy and marine systems. Our organization is ready to support you, from natural circulation waste heat recovery solutions to service and beyond.

Learn more about exhaust gas waste heat recovery with HukkaPowerLoop



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HukkaPowerLoop

Waste heat recovery solutions for power plants

Increased power output from your power asset with Alfa Laval HukkaPowerLoop



HukkaPowerLoop

- Improved Energy Efficiency for Powerhouses



Image: Alfa Laval 3D render images for the HukkaPowerLoop solution in an imaginary location.

Learn more about exhaust gas waste heat recovery with HukkaPowerLoop



As energy needs continue to grow and grid stability becomes more challenging, ensuring a reliable power supply is more important than ever. When grid capacity is limited, on-site power plants are essential — but they generate significant waste heat through their exhaust gases. Alfa Laval’s advanced, scalable HukkaPowerLoop solutions help you capture this energy and convert it into usable power with modular and innovative Hukka waste heat recovery boilers.

Modularity and scalability

Factory-ready units with compact design ensure fast, hassle-free installation on site. Future expansion can be accommodated seamlessly as energy demands grow.

Flexible deployment and retrofits

In response to evolving needs, the waste heat recovery units and balance-of-plant modules can be transferred to alternative locations as necessary.

Fast delivery, quick payback and high ROI

Benefit from quick returns on your investment and gain long-term savings.

Increased power output

Instead of adding new engines or gas turbines on-site, increase the plant output by combined cycle system.

Proven reliability with high availability

Leveraging experience from energy, marine and off-shore systems, our solutions deliver high availability and ease of use, for any operational profile.

Our technological reach is extensive. Since year 2000 we have delivered well over 2000 waste heat recovery boilers in over 100 countries to land-based power plants.

We deliver projects all over the world

Asia



Americas



HukkaPowerLoop in brief

Small	Medium	Large
Size range per high-speed engine or microturbine: 200 - 5000 kW _e	Size range per medium-speed engine: 1,5 - 26 MW _e	Size range per gas turbine: 5 - 60 MW _e
		

Example with waste heat recovery added for 250 MW power plant with gas turbines:

Reduced fuel consumption

over 30%

Reduced CO₂ emissions potential

56 ton /
100 MW_e

Cost of electricity production reduced by

up to 25%

Typical Payback time

1 - 2 years

Increased power plant output potential

+45%

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