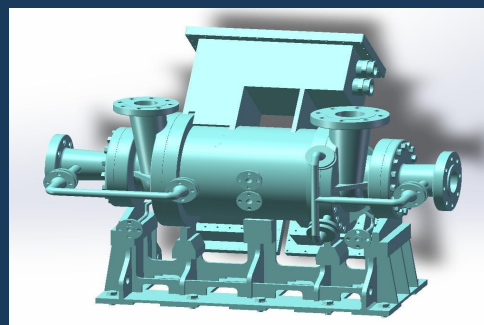


ORC Power Generation Systems

Integrated magnetic-levitation and split-type axial ORC solutions for industrial low-grade heat and geothermal resources.



All ratings are selected against actual heat-source, cooling and site conditions. Final guaranteed performance is defined in the project technical proposal.

Product Range

Configuration	Rated output range	Expander / generator	Representative applications
Integrated Maglev ORC	100-1,500 kW per unit	Radial inflow titanium-alloy turbine; active magnetic bearings; high-speed permanent-magnet generator	Industrial hot water, condensate, low-pressure steam, corrosive process steam
Split-Type Axial ORC	1.5-10 MW per unit	Multi-stage reaction axial turbine; split generator; synchronous or asynchronous generator option	Large-flow hot water, geothermal water, industrial process heat

Representative Source Envelope

Source	Representative inlet conditions	Reference output	Engineering notes
Process hot water	100-142 °C; examples from 110 to 300 m ³ /h	550-1,300 kW installed	Single or multiple heat-source integration
Low-pressure / flash steam	Approx. 100-132 °C; examples from 8 to 18 t/h	400-1,100 kW installed	Indirect-cycle route for difficult or corrosive steam
Large-flow hot water	Approx. 108-124 °C; examples from 686 to 1,500 t/h	2.5-6 MW installed	Axial ORC for large stable heat sources
Corrosive / dusty source	Application-specific composition and fouling assessment	2.2 MW reference	Materials, heat exchanger and sealing selected by source

Core Technical Features

Integrated Maglev ORC	Axial ORC
<ul style="list-style-type: none"> - Oil-free magnetic-bearing architecture - No gearbox or coupling in integrated turbine-generator - Variable-speed operation through inverter system - Compact package with reduced rotating wear components 	<ul style="list-style-type: none"> - Multi-stage high-reaction axial flow path - Pre-twisted blade design for variable operating conditions - Mature special sealing system - Configurable exhaust orientation and plant layout

Optional Configurations

System area	Available / project-selectable options
Heat-source integration	Single-source or multi-source heat exchanger arrangement; direct hot-water interface; indirect steam condensation route
Heat rejection	Water-cooled condenser; air-cooled condenser; evaporative condenser, subject to site conditions
Package arrangement	Skid-mounted main generation package; split-type arrangement; outdoor structural platform
Electrical and controls	Variable-frequency grid connection; local PLC/HMI; remote monitoring; plant DCS interface

Working Fluid and System Selection

Working fluid, cycle configuration and materials are selected during thermodynamic design based on source temperature, cooling conditions, safety requirements and local regulations.

Typical Supply Scope

Base Technical Scope	Project-Selectable Scope
<ul style="list-style-type: none"> - ORC expander-generator - Cycle process design and equipment sizing - Control and protection system - Commissioning and performance test support 	<ul style="list-style-type: none"> - Evaporator / heat exchanger package - Condenser and cooling equipment - Pumps, piping and valves - Skid / structural platform and remote monitoring

Minimum Data Required for Proposal

Required input	Customer information
Heat source	Medium, composition, impurities, inlet/outlet temperature, pressure, normal/min/max flow
Operation	Annual hours, load variation, shutdown schedule and required availability
Site utilities	Cooling-water temperatures and availability, ambient conditions, grid voltage/frequency
Project conditions	Plot constraints, hazardous-area classification, applicable codes and target schedule

Representative References

Application	Source conditions	Installed configuration
Petrochemical multi-source hot water	Temperature: 124.5 °C; pressure: 0.25 MPa(A); flow: 110 t/h; plate-type heat exchanger	650 kW integrated maglev ORC
Urea-process hot water	Temperature: 142 °C; pressure: 500 kPa(A); flow: 300 m ³ /h	2 x 650 kW integrated maglev ORC
Geothermal water	Temperature: 108 °C; flow: 1,500 t/h	6,000 kW split-type axial ORC

Project-specific technical proposal will define guaranteed output, efficiency, working fluid, design conditions, materials, electrical data, utilities, dimensions, applicable standards and warranty terms.