TURBODEN
LARGE HEAT PUMP

MORE HEAT OUT OF HEAT
SINCE 1980

Turboden is an Italian firm and a global leader in the design, manufacture, and maintenance of Organic Rankine Cycle (ORC) systems, highly suitable for distributed generation, which produce electric and thermal power exploiting multiple sources.

Thanks to its long experience in the energy efficiency sector, today Turboden expands its solutions offering with gas expanders and large heat pumps.
GLOBAL AND PROVEN EXPERIENCE

Experience in over 50 countries
With 430+ installations
Installed power 750+ MWe

Electric power generated 25 thousand GWh
Cumulative operation time 19 million hours
Average availability 98.4%

- **Biomass**: 333 units, 483.7 MWe
- **Waste Heat**: 38 units, 91.5 MWe
- **Geothermal**: 16 units, 119.1 MWe
- **Oil & Gas**: 5 units, 37.3 MWe
- **Gas Expander**: 2 units, 1.3 MWe
- **Waste to Energy**: 27 units, 68.7 MWe
- **High Temperature Cogeneration**: 2 units, 2.1 MWe
- **LARGE HEAT PUMP**: 2 unit, 18 MWth
- **Biogas**: 430+ MWe

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TURBODEN EXPERTISE APPLIED TO LARGE HEAT PUMPS

HEAT TRANSFER
Expertise in design of custom equipment with different heat streams.

HIGH TEMPERATURE
40+ years experience with operative temperatures up to 400°C

WORKING FLUIDS
Selection of most suitable fluid case by case. Use of low GWP, low ODP and not harmful fluids.

TURBOMACHINES
Own design for more than 60 different turbines. Compressor shares common technical features and solutions with Turboden turbine.

INNOVATIVE DESIGN
Custom-made design with multiple possibilities of optimization.
HOW TO DECARBONIZE PULP&PAPER INDUSTRY: TURBODEN CONCRETE SOLUTION

PROJECT FEATURES
- Project Name: UNDISCLOSED
- Client: UNDISCLOSED
- Country: Northern Europe
- Status: under construction
- Size: 12 MWth

TECHNICAL FEATURES
- Delivery: superheated steam at >170 °C
- Turboden scope: EPC
- Centrifugal compressor from MHI
- LHP working fluid: hydrocarbon
MEET OUR SPEAKER

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Thank you!

“Let’s accelerate the transition to a world powered by low-carbon technologies”