



Benson[®] HRSG

Our know-how makes you flexible

[siemens-energy.com/powergeneration](https://www.siemens-energy.com/powergeneration)

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Your benefits

- Steam parameters can be further increased because there is no pressure limitation
- Increased efficiency in part-load operation and at high ambient temperatures, thanks to reduced attemperator flows compared with a drum-type HRSG
- Increasing operational flexibility: no limit on gas turbine load transients during startup and load changes, and no limit on load transients for possible duct firing



Panda Power Funds, USA: Two Benson heat-recovery steam generators guarantee a high level of flexibility in operation

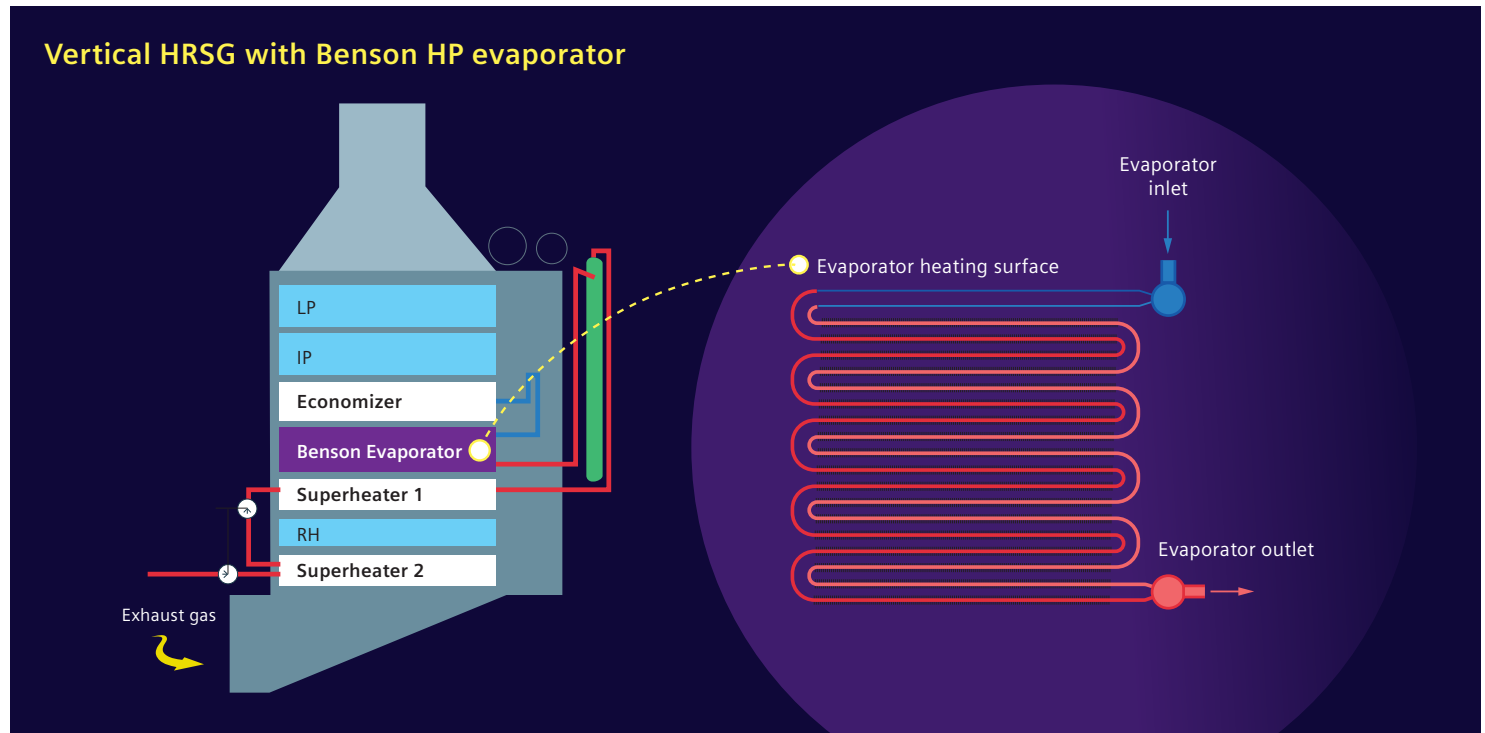
Once-through steam generators

Benson® technology is a proven process for large-scale steam generation in power plants. The heart of this process is the once-through principle. Combined with sliding pressure operation, this allows for highly efficient, flexible, and reliable power plant operation.

To this day, more than 100 Benson heat recovery steam generators have either been commissioned or are currently being built. The

first combined cycle power plant with a Benson heat-recovery steam generator (HRSG) – the 390 MW Cottam Development Center, located in Great Britain – was successfully commissioned in 1999.

Benson HRSGs make a substantial contribution to the realization of highly efficient and flexible combined cycle power plants. They can be constructed either horizontally or vertically.



The best possible operation for your plant

Our know-how focuses on the thermodynamic and thermohydraulic design of the evaporator system of Benson HRSGs.

Specifically developed and highly specialized Benson design software enables us to make a number of predictions:

- Pressure drop, flow distribution and flow patterns
- Temperature imbalances and material temperatures

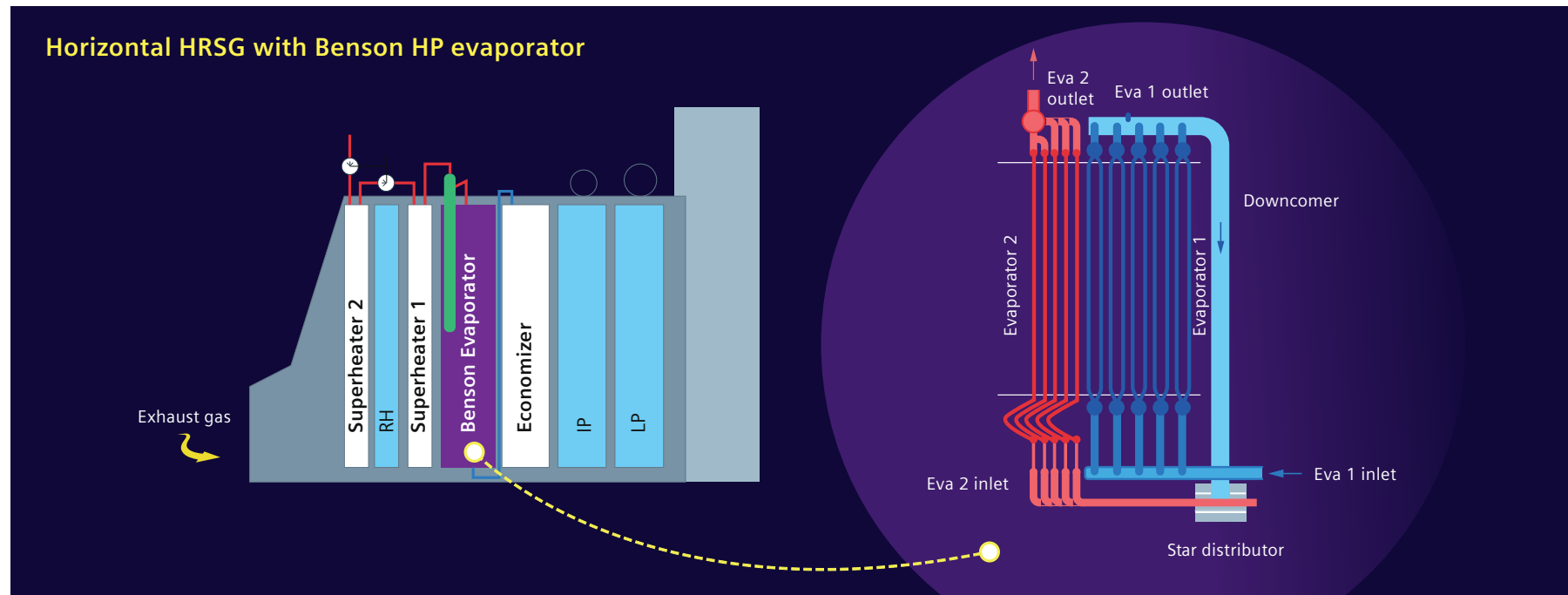
- Static and dynamic flow stability in the evaporator heating surfaces

Moreover, our Benson-specific control concepts make a key contribution to ensuring the best possible operation of your particular power plant.

We offer you our specific know-how within the Siemens Energy Benson license. The license comprises the following components:

- Usage of Siemens Energy patents for the construction of Benson steam generators
- Usage of specifically developed and highly specialized Benson design software
- Training, consulting and design reviews
- Transfer of the latest findings from research and development

In addition to providing the Benson license, we also help utilities with advise on questions related to the evaporator system of once-through steam generators.



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For more information, please visit our website:
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