

Spanner RE² GmbH

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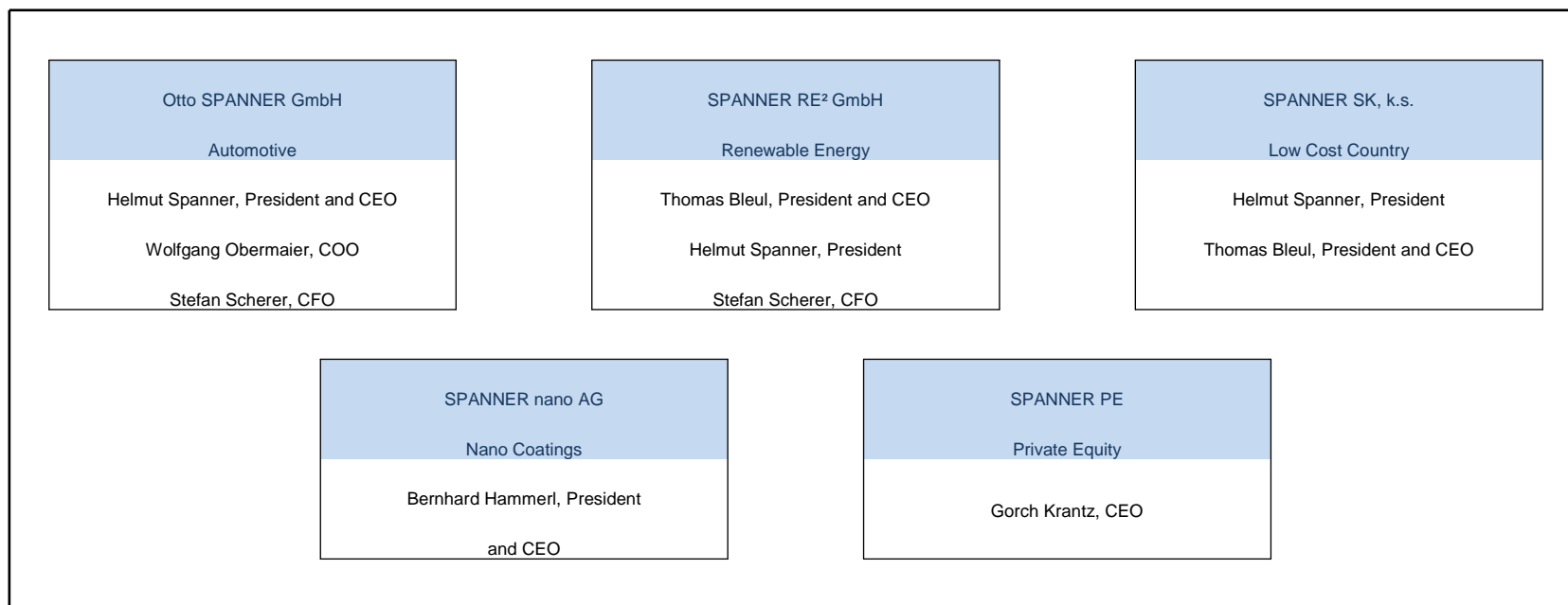
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Spanner RE² GmbH – We make renewable energy competitive

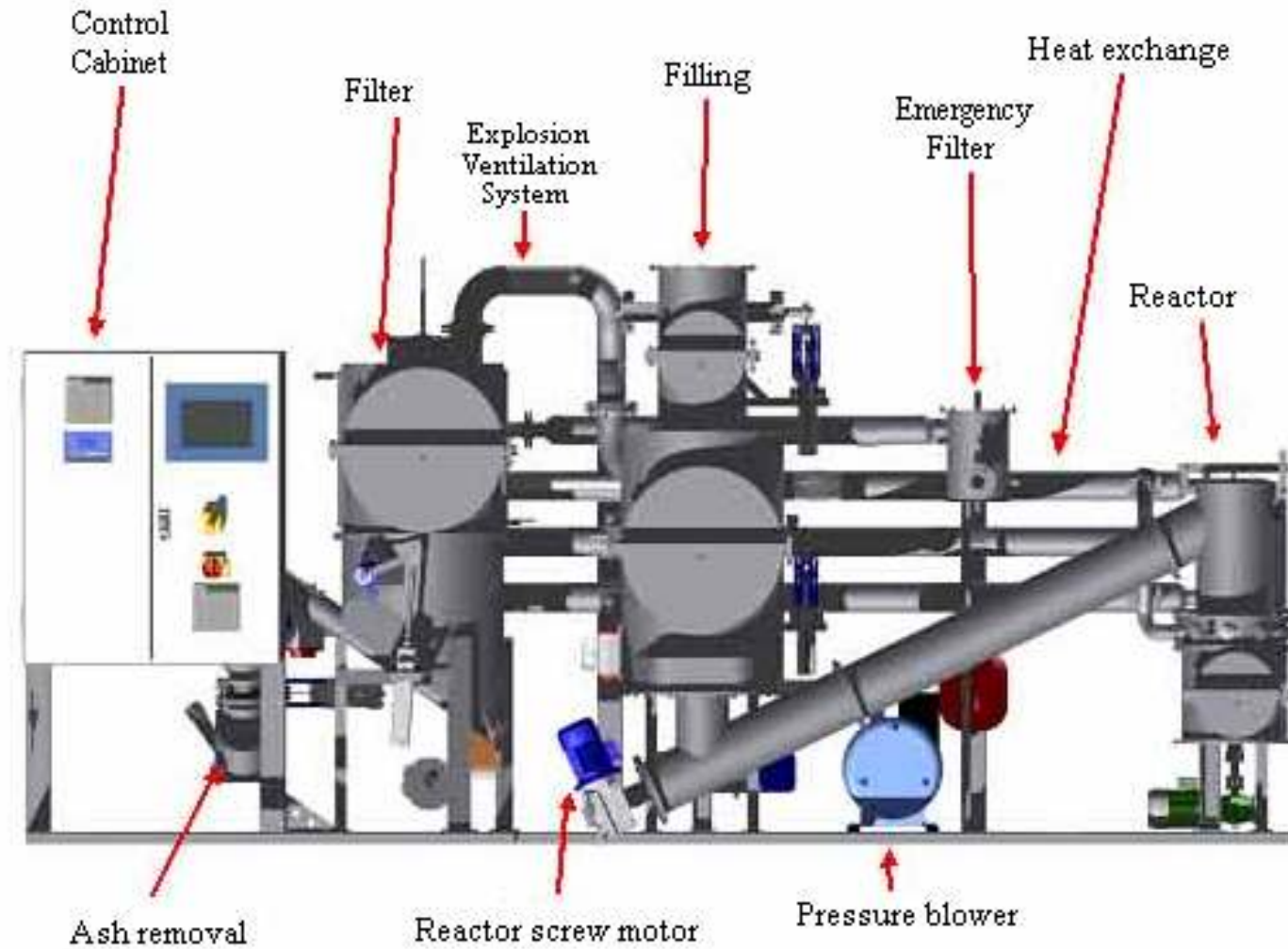
Spanner RE² GmbH is a subsidiary of the Spanner Group with its focus in the field of renewable energies.



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Features

- Small, decentralised systems with 30-50 kW electrical output
- Significant heat recovery possible
- Series construction using standard containers
- Wood gas from the reactor virtually tar-free
- Simple gas cleaning (fabric filter)
- Operates using conventional wood chips (without screening)
- The system does not produce condensation or tar as a waste product

Current Status: 20 Systems in Operation

- Thomas Schmid / Heggelbach / Bodensee 5300+ hours
- Sepp Braun / Freising / approx. 1600 hours
- Buck Bros. / Ulm / 4500+ hours
- Firtz family / Altenmünster / near Augsburg / 5700+ hours
- Labek family / Kufstein / 3800+ hours
- Konrad family / near Coburg / 1718+ hours
- Huber family / near Eggenfelden / 3000+ hours
- Hofer / Velden Vils / Started Dec 2009 / Meter kW 17 / 2900 - 3000 hours

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- Büchner / Arnstorf / approx. 2490 hours. Started November
- Müller Fischerbach, Black Forest / Delivered October / Started January / 1241 hours
- Hofer / South Tyrol / Systems collected in January / 2 x 50 kW / Started March-April
- Fröling Company / Austria / Approval given
- Nyhnius, Münsterland, 2 x 40 kW, 100% connected, waiting for electricity grid approval
- Stegemann / 'Big Bertha' on the grid, 3000 hours in total
- Offshoot of the Joos system / approx. 7 systems in the field with good to satisfactory operation (up to 20,000 hours operating time)

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System Example



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Research and Development for the Future (Part 1)

- Charcoal usage in the system
(increased efficiency, only ash discharged)
- Pilot injection technology to increase efficiency
- Which influence does the wood chip form have on efficiency and gas quality?
- Gasification of pellets
- Gasification from mixed pellets with additives

Research and Development for the Future (Part 2)

- Distance between nozzles and the beginning of the grate: What influence this has on gasification of different quality wood chips.
- In the process we blow air into the reactor, which has an effect on
 - Air volume, and
 - Air temperature
- Determining actual efficiency
- What impact the bark fraction has on the operating life of the motors?
- Adjusting the wood gas motors



Thank you for your attention!