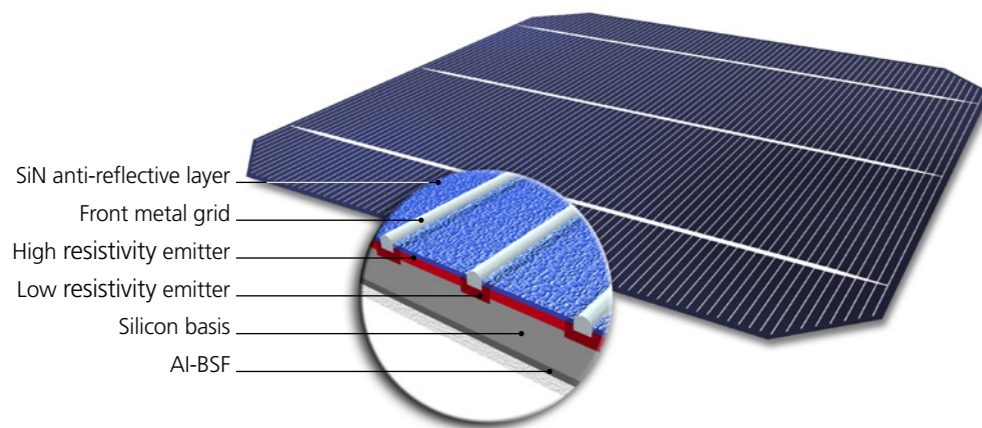


centrotherm
photovoltaics

State-of-the-art cell design

We continuously optimize our production lines and processes in order to increase the efficiency of solar cells, improve yield and production output and to make solar cell production more cost-effective. Therefore the various R&D teams of the centrotherm photovoltaics group are joining forces to develop high-efficiency solar cells and the corresponding manufacturing technologies. At the same time, established solar cell production processes are continuously optimized.



Turnkey solutions for
solar cell processing



centrotherm
photovoltaics

Silicon & Wafer
Solar Cell & Module
Thin Film Module

Selective Emitter Technology

centrotherm photovoltaics has developed its own production technology which is secured through various patent registrations.

The benefits in brief:

- Optimized doping profile
- Improved cell performance
- Lower cost/kWh generated
- Suitable for mono-Si and multi-Si material

Turnkey solutions for solar cell processing

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www.centrotherm.de

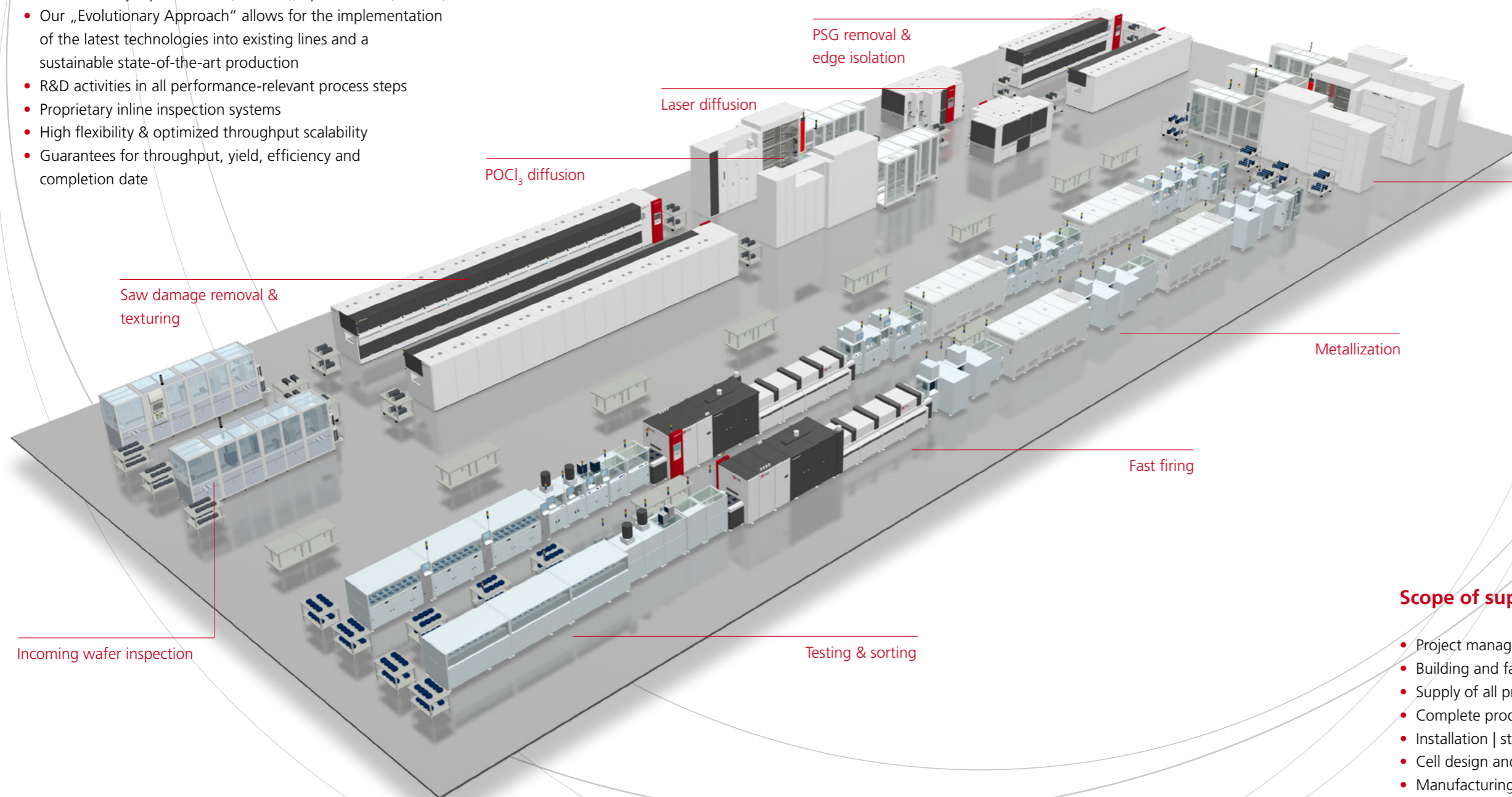




FlexLine Plus

- Cell efficiency: up to 18.7% (mono-Si), up to 17.0% (multi-Si)
- Our „Evolutionary Approach“ allows for the implementation of the latest technologies into existing lines and a sustainable state-of-the-art production
- R&D activities in all performance-relevant process steps
- Proprietary inline inspection systems
- High flexibility & optimized throughput scalability
- Guarantees for throughput, yield, efficiency and completion date

Turnkey solutions for solar cell processing



Possible layout of a 120 MW solar cell turnkey line

Scope of supply

- Project management
- Building and facility consulting
- Supply of all production tools & design
- Complete production automation
- Installation | start-up | ramp-up
- Cell design and technology transfer
- Manufacturing technology
- Process and production control
- MES with database and control functionality
- Documentation, training & technology support