weisstechnik®
a schunk company

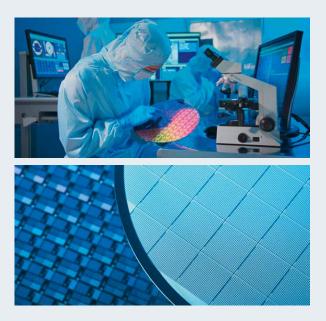**Reliable, efficient and silicone-free.**
Oven systems for
semiconductor processing.

vötschoven

vötschoven.
For perfect processes.

Always close to you.
There for you in partnership.

Ideal conditions for semiconductor processing.

Semiconductor and electronic device manufacturing involves a series of critical steps, each with specific requirements related to process conditions, including heat treatments. To ensure consistent and reliable production, precise coordination of technology is essential.

Our systems provide the ideal conditions for both, the front- and back-end processes. The systems are designed to be repeatable, safe and economical. Today and tomorrow.

Innovation driven by passion.

At Weiss Technik, we believe in innovation fuelled by passion. Our collaborative approach supports companies across research, development, production and quality assurance. With a network of 22 companies spanning 15 countries and 40 locations, we are strategically positioned to serve our customers and ensure equivalent product quality worldwide.

From the R&D phase to production, we engage in close cooperation with our clients. Our continuously expanding team ensures reliable service in all countries with a semiconductor industry presence, including the USA, Singapore, Malaysia, France, China and Germany.

Customised solutions from a single source.

Our specialists for thermal processes in the semiconductor industry.

Especially for applications in the semiconductor industry, we have been developing, planning and producing customised systems with our experienced team for decades. Our project procedure in 3 steps:

1. Non-disclosure agreement and technical coordination
- Materials (flammability, quantity, quality)
- Process parameters (inert gas, heating and cooling rate of the process, required technical precision)
- Handling concept (degree of automation) and implementation of custom MES interface (e.g. SECS/GEM)

2. Project planning and pre-engineering
- Tests in the R&D test centre in Germany
- Definition of temperature uniformity and airflow
- Technical specification with detailed explanation of the system

3. Implementation of the solution
- Process validation with prototypes
- Installation and commissioning
- Validation and after-sales support

Clean room drying for manufacturing aids.

Application: Drying processes for epitaxy equipment and transport boxes.

End temperature: 170 °C
Working space volume: 200–8000 l

System description
- Humidity sensor in exhaust air for process tracing
- Recirculating air fan with frequency control for flexible equipment utilisation
- RFID sender/receiver unit for tracking

Options
- Pull-out switch cabinet for minimised footprint
- ESD design for safe installation
- Automatic inert gas flow control with O_2 concentration measurement for process stability

Highlights:
- Compliant up to clean room class ISO 4
- Silicone-free and GMP-compliant design
- Loading with customised loading trolley

Wafer and back-end process heat treatment system.

Application: Heat treatment for wafer processing, die bonding, mold curing for electronic packaging and glass frit bonding.

End temperature: 450 °C
Working space volume: 180–5000 l

System description
- Rapid heating/cooling ramps: 170 K/h
- ESD design for safe installation
- Automatic inert gas flow control with O_2 concentration measurement for process stability
- Silicone-free and GMP-compliant design

Options
- Customised MES interface (e.g. SECS/GEM)
- Clean room wall installation with pull-out switch cabinet
- Design for flammable substances (EN 1539)

Highlights:
- Excellent temperature deviation: ±2 K at 440 °C
- Fast cooling under inert gas
- Ultra-fast heating option with 550 K/h

In-line solution for thermal processing of batches.

Application: Heat treatments in semiconductor processing, including LTHC, photoresist bake, burning-in testing and data retention bake.

End temperature: 450 °C
Working space volume: 180–1500 l

System description
- Customised SECS/GEM interface protocol
- Silicone-free and GMP-compliant design
- Fast cooling under inert gas via heat exchanger
- Automatic inert gas flow control with O_2 concentration measurement for process stability
- HEPA filter status monitoring via differential pressure sensors to ensure clean process conditions

Options
- Stackable oven systems for optimised footprint
- Clean room wall installation with pull-out switch cabinet

Highlights:
- Integration into automated wafer line
- AGV- and OHT-compatible
- Rapid heating and cooling ramps up to 210 K/h

We measure ourselves
by our service.

Our services –
lots of good reasons:

24/7-Service-Helpline:
+49 1805 666 556

- ⌐ Global service network
- ⌐ Wide range of preventive maintenance
- ⌐ Reliable spare part supply
- ⌐ Special deployments available any time
- ⌐ Certified proper disposal of outdated devices

Our Service Experts are always near you.

TÜV NORD
TÜV NORD CERT
GmbH
DIN EN ISO 9001/14001/DIN ISO 45001
Freiwillige Zertifizierung

Weiss Technik GmbH

Heat Technology

Greizer Straße 41–49

35447 Reiskirchen/Germany

T +49 6408 84-73

info.ovens@weiss-technik.com

weiss-technik.com

Test it. Heat it. Cool it.