

Smart Sinter HIP Furnace SSH
Our Standard Solution

SSH

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The SSH furnace is a **standardized** version of PVA TePla's well-established Sinter-HIP series "COD".

As a result of optimization, standardization and pre-production, the SSH series offers a significant low investment price combined with a short delivery time.

Application

Dewaxing of green bodies

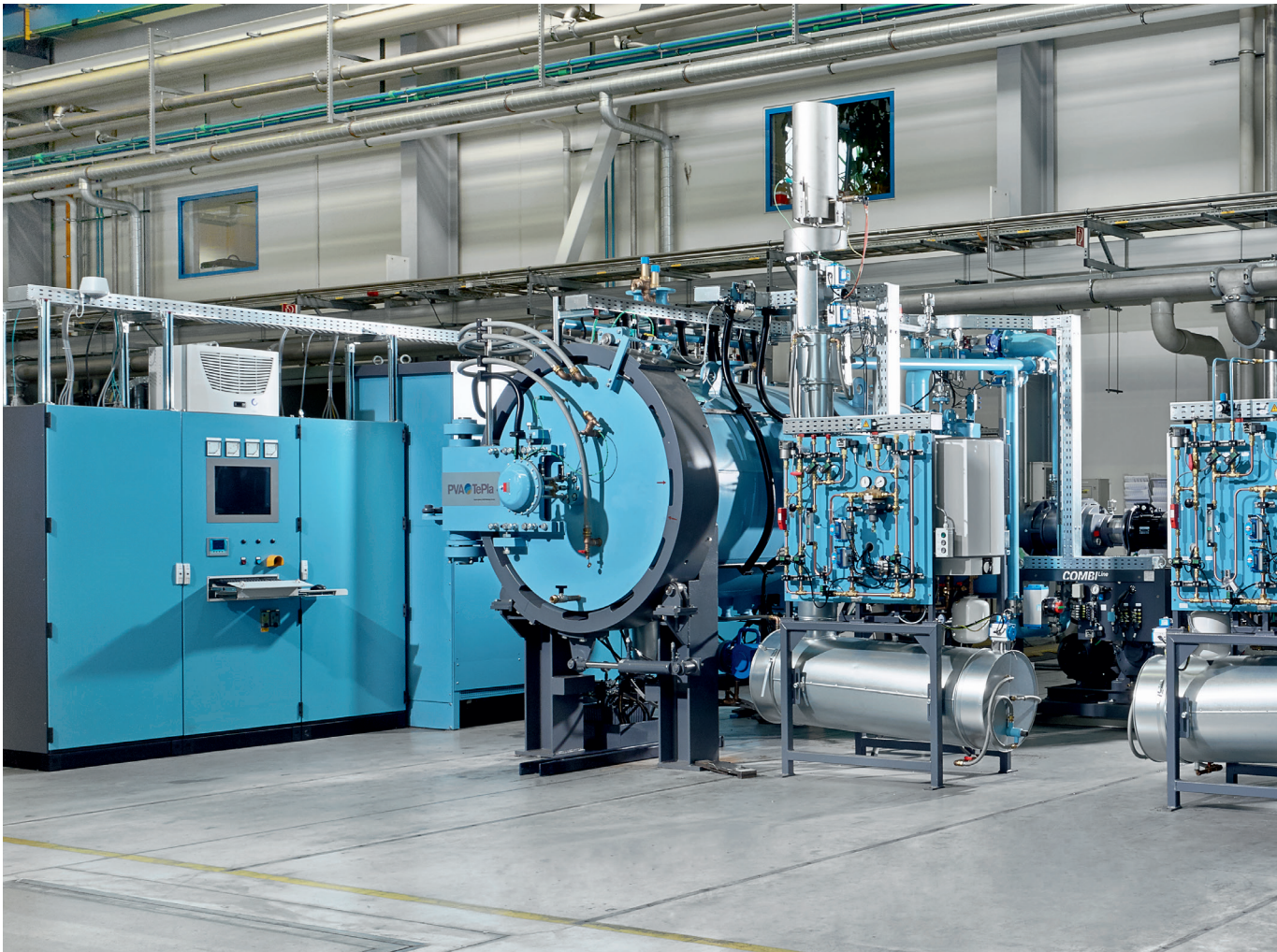
- out of direct- or indirect pressing, extruding or PIM forming processes
- at partial pressure (Ar)
- with H₂ burn-off mode (option)
- multiple binders capability (paraffines, wax, PEG etc.)

Hot-Isostatic-Pressing

- isostatic post compacting under inert gas at sinter temperature
- fast cooling under pressure gas

Sintering

- under vacuum or partial pressure inert gas
- with pressure control

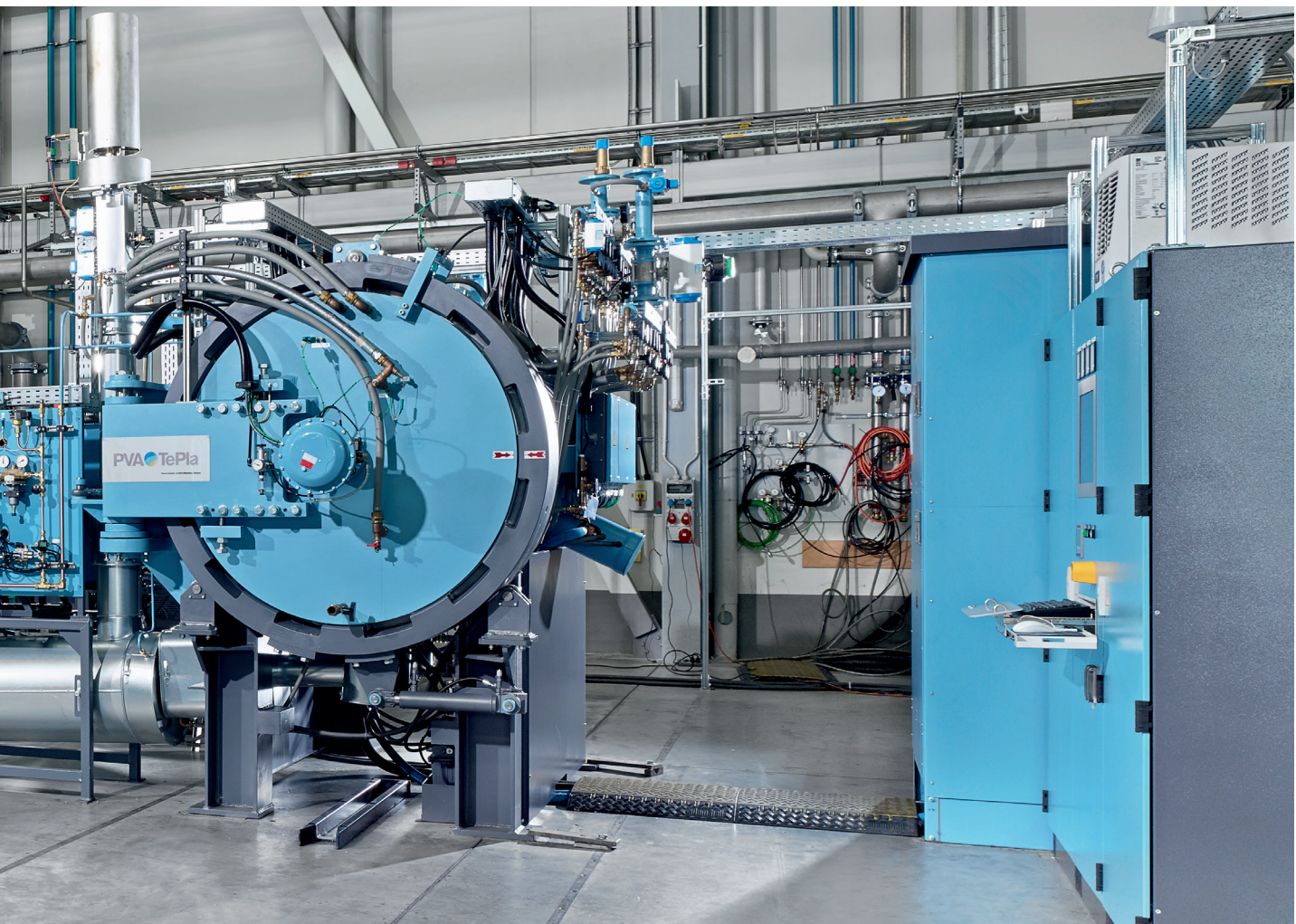


Customer Benefits

- High product quality by excellent temperature homogeneity through all process steps
- Short delivery time due to pre-production
- Shortest dewaxing and cooling times
- Low HIP gas consumption
- High energy efficiency
- Short installation and ramp-up time, all pre-tests and qualifications done at PVA TePla site
- Elaborated safety system for reliable and full-automatic operation
- Proven design and performance – reliable, sustainable, durable

Characteristics and Technical Data

- Horizontal cold-wall furnace made of fine-grained steel
- Sinter-HIP with 60 bar operating pressure
- Maximum temperature: 1,600°C
- Useable volume: 400 ltr.
- Useable dimensions (w x h x l): 500 x 540 x 1,500mm
- Temperature uniformity $\leq \pm 7K$ at sinter temperature
- Ultimate vacuum: 5×10^{-2} mbar
- 2 independently controlled heating zones
- High quality graphite heating elements
- Excellent thermal insulation designed for extra-long lifetime
- "Safety-Integrated" PLC made by Siemens
- Operation via PC and automatic process control including tools for data storage, monitoring and analysis
- Mirror image layout possible



PVA TePla – The Company

As a vacuum specialist for high-temperature and plasma treatment processes, PVA TePla is one of the world's leading plant engineering companies. Its core competencies are in the fields of hard metal sintering and crystal growing as well as the use of plasma systems for surface activation and ultra-fine cleaning.

With its systems and services, PVA TePla enables and supports the innovative manufacturing processes and developments of its customers, primarily in the semiconductor, hard metal, electrical/electronic and optical industries - as well as the energy, photovoltaic and environmental technologies of tomorrow.

Vacuum Systems – The Products

The core competency of PVA Industrial Vacuum Systems is to build resistance and inductively heated systems for vacuum and high temperature applications and heat treatment.

Especially graphite resistance heated vacuum (COV) and pressure (COD) systems for the universal application of dewaxing, vacuum sintering and the subsequent isostatic pressing of metals, carbides, alloys and ceramics are main products of the Industrial Systems Division.

Metallic heated high-vacuum heat treatment furnaces (MOV), designed for typical applications like vacuum brazing, degassing, sintering and cleaning are further successful products.

Inductively heated melting and casting systems (VSG) for melting of metals, alloys and special materials under high-vacuum, fine-vacuum or inert gas atmosphere and heat treatment furnaces (IOV) for sintering and carburising applications round up PVA Industrial Vacuum Systems' product range of vacuum systems.