

## c.VACUNITE 300 A | 300 | 180

**MOST VERSATILE MULTI PLATE  
VACUUM SOLDERING SYSTEMS**



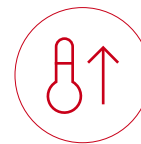
HCOOH



Hydrogen  
capability



100 %  
paste & flux



High temperature  
processing



Automated  
operation

The centrotherm c.VACUNITE 300 and 180 multi plate vacuum soldering systems are designed for thermal vacuum-based processing of various materials in high-volume production. The systems meet highest requirements of ultra-clean voidless soldering for advanced packaging and power semiconductor applications.

With c.VACUNITE 300A, which is equipped with an automated door closure centrotherm provides an excellent solution for fully automated production lines.

Depending on the field of application the systems ensure fast heat-up and cool-down rates for short cycle times and large processed area per hour while reaching temperatures up to 650 °C.

c.VACUNITE systems allow processes under pure and oxygen-free atmospheres and provide surface activation with 100% hydrogen (H<sub>2</sub>), formic acid (HCOOH) or forming gas (N<sub>2</sub>H<sub>2</sub>). All systems are suited for 100% paste and flux.

The void-affected area can be reduced to less than 1% compared to common reflow soldering systems ranging at 5%.

The process control computer is equipped with a user-friendly touch screen for operating, process profile editing and recipe storing. Accessibility through Ethernet and USB interfaces allows connection with printers, external storage devices and remote access.

## TYPICAL APPLICATIONS

- Power Semiconductors
- Advanced Packaging
- Hybrid Microelectronic Assemblies
- Optoelectronic Packaging
- Hermetic Package Sealing
- Wafer Level Packaging
- UHB LED Packaging
- MEMS Package Sealing
- Glass Bonding
- Copper Annealing
- Thermal processes in various atmospheres
- Inert gas | Annealing | Oxidation

## FEATURES & BENEFITS

- Excellent temperature uniformity up to 0.5%
- 100% suitable for paste and flux
- Independent and separately controlled gas lines
- Flux management
- Particle-free
- Uptime > 98.5%
- Cooling water supply by open water cooling system or domestic water supply
- Safety PLC
- Controllable via 19" touch screen
- Remote access for service
- MES connection via OPC-UA
- Maintenance friendly design for high uptime

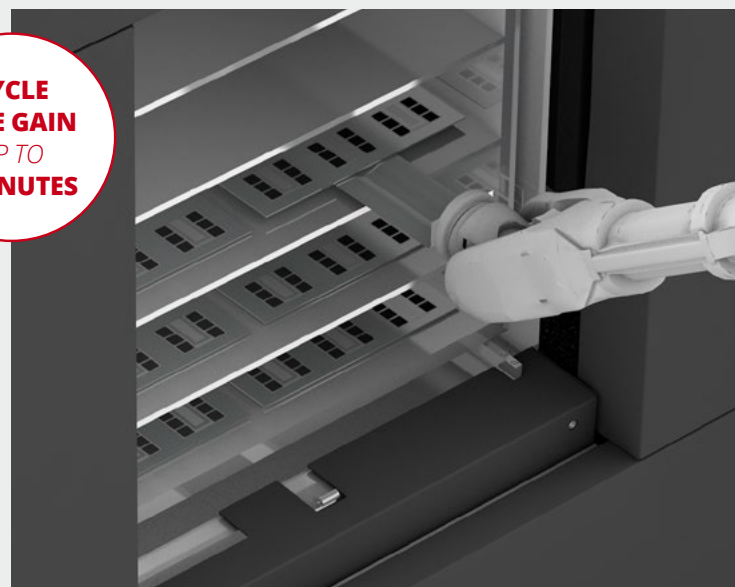
## C.VACUNITE 300 A

### AUTOMATED LOADING AND UNLOADING

- Integration into automated high-volume production lines
- Optimum pose repeatability and repeat accuracy guarantee steady process results
- Increased throughput and yield
- Door opening and unloading at higher temperatures possible (up to 100 °C)
- Further cool down on conveyor or in buffer
- Proven and reliable process and technology



**CYCLE  
TIME GAIN  
UP TO  
5 MINUTES**



## KEY DATA

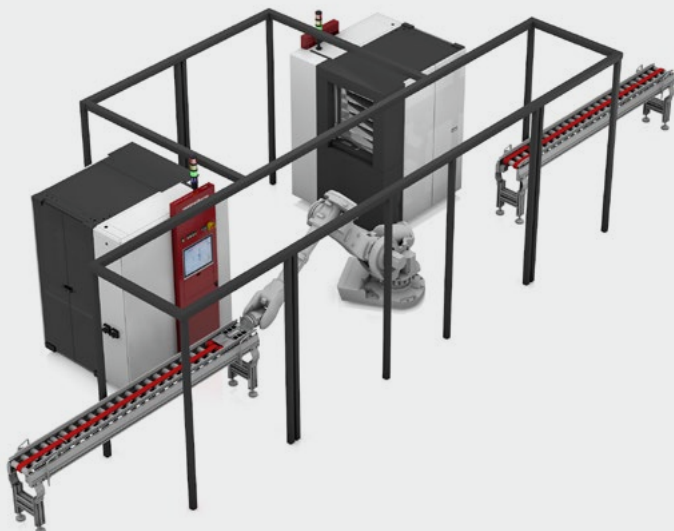
	<b>G.VACUNITE<sup>300</sup></b>	<b>G.VACUNITE<sup>300 A</sup></b>	<b>G.VACUNITE<sup>180</sup></b>
Plate size	540x410 mm <sup>2</sup>	540x410 mm <sup>2</sup>	540x410 mm <sup>2</sup>
Max. substrate height	100 mm	100 mm	100 mm
Max. load per plate	25 kg	25 kg	25 kg
No. of heating plates	5	5	3
Possible process gases	N <sub>2</sub> , H <sub>2</sub> (100), N <sub>2</sub> H <sub>2</sub> (95/5), HCOOH		
Vacuum level	0.1 mbar (opt: 10 <sup>-5</sup> mbar)	0.1 mbar	0.1 mbar (opt: 10 <sup>-5</sup> mbar)
Vacuum pump (oil sealed)	40 or 65 m <sup>3</sup> /h	40 or 65 m <sup>3</sup> /h	40 or 65 m <sup>3</sup> /h
Heat-up   cool-down rate*	40   150 K/min	40   150 K/min	40   150 K/min
Process temperatures	up to 450°C (opt: 650°C)	up to 450°C	up to 450°C (opt: 650°C)
System weight	1500 kg	1600 kg	1200 kg

\* The above values may vary depending on the specific system design.

## MODULAR CONCEPT FOR PROGRESSIVE EXPANSION POSSIBILITIES

### TWIN SYSTEM (SLIM CONFIGURATION)

- 2 tools loaded by 1 robot
- Floorspace: approx. 16 m<sup>2</sup>



### QUAD SYSTEM

- 4 tools loaded by 1 robot
- Floorspace: approx. 23 m<sup>2</sup>

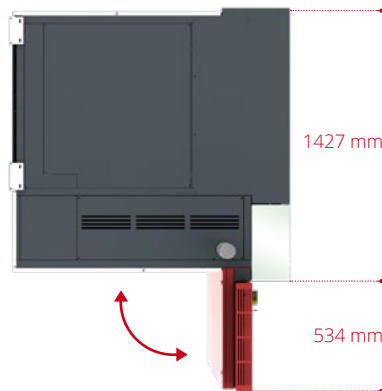


## OPTIONS

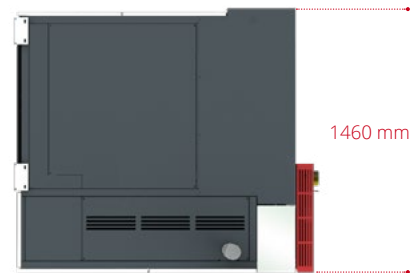
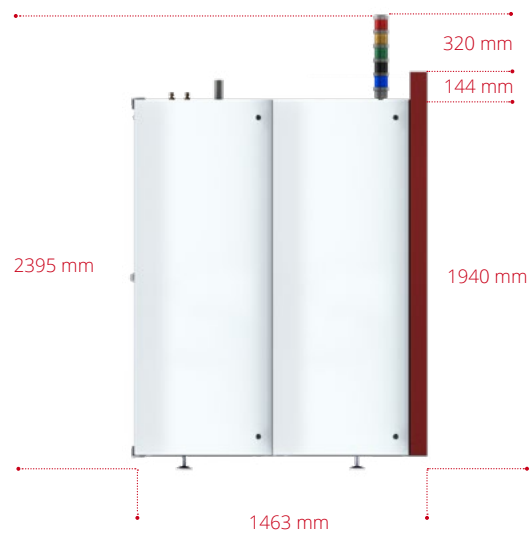
- Pure hydrogen (H<sub>2</sub>)
- Integrated HCOOH bubbler
- Vacuum system with dry pump
- Customized MES interface
- 6 thermocouples for surface temperature recording

## DIMENSIONS

### G.VACUNITE 300 A



### G.VACUNITE 300 | 180



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