

C.VACUNITE

NEXT GENERATION VACUUM SOLDERING SYSTEMS

OPTIONAL:
HIGH VACUUM PLASMA



650°C
HIGH
TEMPERATURE



100%
HYDROGEN
CAPABILITY



100%
PASTE & FLUX



C.VACUNITE 180
C.VACUNITE 300



C.VACUNITE 6
C.VACUNITE 12

The centrotherm c.VACUNITE contact heat system platform covers a wide range of thermal vacuum applications from process performance-based R&D processing up to high-volume production. In the field of vacuum soldering the systems meet highest requirements of voidless soldering for Advanced Packaging and Power Semiconductor applications. The void-affected area can be reduced to less than 1% whereas common reflow soldering systems range at 5%.

Depending on the field of application c.VACUNITE systems are available with single and multiple heating plates ensuring both, fast heat-up and cool-down rates for short cycle times and large processed area per hour while reaching temperatures up to 650 °C.

FEATURES AND BENEFITS

- Excellent temperature uniformity up to 0.5%
- 100% suitable for paste and flux
- Independent and separately controllable gas lines
- Flux management
- Remote access for service
- Cooling water supply by open water cooling system or domestic water supply
- Safety PLC
- Maintenance friendly design for high uptime
- MES connection available

c.VACUNITE vacuum soldering systems allow processes under pure and oxygen-free atmospheres and provide surface activation with 100% hydrogen (H₂), formic acid (HCOOH), forming gas (N₂H₂) and/or additional MW plasma. All systems are suited for 100% paste and flux.

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.

At its german headquarters, centrotherm is operating a laboratory for soldering tests and processing several customer demos.

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

OPTIONS

- Pure hydrogen (H₂)
- Formic acid (HCOOH)
- MW plasma (gases: H₂, N₂H₂, ArH₂, Ar, O₂)
- Process temperature up to 650 °C possible
- Vacuum level up to 10⁻⁵ mbar
- Vacuum system with dry pump

KEY DATA

	G.VACUNITE⁶ G.VACUNITE¹²	G.VACUNITE²⁴	G.VACUNITE¹⁸⁰ G.VACUNITE³⁰⁰
Field of application	R&D, pilot production	R&D, pilot production	High-volume production
Plate size	200x200 mm ² (6) 300x300 mm ² (12)	410x230 mm ²	540x410 mm ²
Max. substrate height	120 mm (6) 150 mm (12)	150 mm	100 mm
Max. load per plate	2.5 kg (6) 5 kg (12)	15 kg	25 kg
No. of heating plates	1	1	3 (180) 5 (300)
Possible process gases	N ₂ (optional: H ₂ (100), N ₂ H ₂ (95/5), HCOOH)		
Vacuum level	0.1 mbar (option: 10 ⁻⁵ mbar)		
Vacuum pump (oil sealed)	24 m ³ /h	24 m ³ /h	55 or 80 m ³ /h
Heat-up cool-down	80 120 (K/min)	50 140 (K/min)	40 150 (K/min)
Process temperatures	up to 450 °C	up to 450 °C	up to 450 °C (option: 650 °C)
System weight	150 kg (6) 180 kg (12)	440 kg	1200 kg (180) 1500 kg (300)
Dimensions (LxWxH)	1335x750x2000 mm ³	1750x640x2230 mm ³	1470x1460x2070 mm ³

* gases: H₂, N₂H₂, ArH₂, Ar, O₂

centrotherm international AG

Württembergischer Str. 31
89143 Blaubeuren, Germany

T +49 7344 918 6794

F +49 7344 918 6387

semi-sales@centrotherm.de