c.VACUNITE 300 A | 300 | 180

Most versatile multi plate vacuum soldering systems



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_2), formic acid (HCOOH) or forming gas (N_2H_2).

The void-affected area can be reduced to less than 1% whereas common reflow soldering systems range 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.

HCOOH

H_2 HYDROGEN CAPABILITY

AUTOMATED OPERATION

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FEATURES

- Excellent temperature uniformity up to 0.5%
- Independent and separately controlled gas lines
- 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

TYPICAL APPLICATIONS

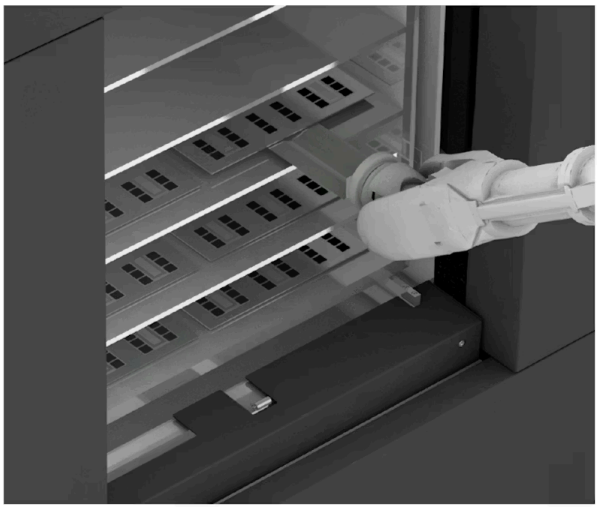
- Power semiconductor applications
- Advanced packaging
- Hybrid microelectronic assemblies
- Optoelectronic packaging
- Hermetic package sealing
- Wafer level packaging
- UHB LED packaging
- MEMS package sealing
- Glass bonding
- Copper annealing
- Thermal processes in various atmospheres
- Inert gas | Annealing | Oxidation

.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



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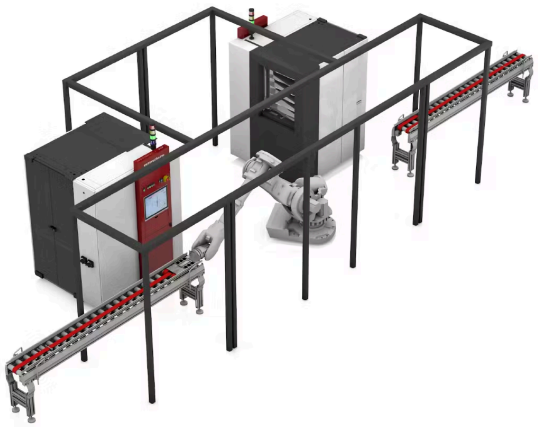
OPTIONS

- Pure hydrogen (H_2)
- Integrated HCOOH bubbler
- Vacuum system with dry pump
- Customized MES interface
- 6 thermocouples for surface temperature recording

MODULAR CONCEPT FOR PROGRESSIVE EXPANSION POSSIBILITIES





Twin System (Slim configuration)

- Two tools loaded by one robot
- Floorspace approx. 16 m^2

Quad System

- Four tools loaded by one robot
- Floorspace approx. 23m^2



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	c.VACUNITE 300A	c.VACUNITE 300	c.VACUNITE 180
Plate size	540x410 mm^2	540x410 mm^2	540x410 mm^2
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_2, H_2 (100), N_2H_2 (95/5), HCOOH	
Vacuum level	0.1 mbar	0.1 mbar (opt: 10-5 mbar)	0.1 mbar (opt: 10-5 mbar)
Vacuum pump (oil sealed)	40 or 65 m^3/h	40 or 65 m^3/h	40 or 65 m^3/h
Heat-up rate*	40 K/min	40 K/min	40 K/min
Cool-down rate*	150 K/min	150 K/min	150 K/min
Process temperatures	up to 450 °C	up to 450 °C (opt: 650 °C)	up to 450 °C
System weight	1600 kg	1500 kg	1200 kg
Dimensions (LxWxH)		1427 x 1428 x 2395 mm^3	

* values may vary depending on specific system design

contact us!

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