

## Microwave Plasma System GIGA 80 Plus

- improved wire bonding
- improved underfill
- improved mold adhesion
- improved ball attach

Plasma Systems

# PVA TePla

## Microwave Plasma Excellence

The **Plasma System GIGA 80 Plus** is a fully automatic low-pressure microwave plasma system for cleaning advanced chip packages prior to die attach, wire bond, encapsulation and ball attach. The electrode-free energy is the key factor for processing substrates with attached dies. Microwaves of 2,45 GHz are simply applied through an applicator on top of the vacuum chamber producing a largely extended plasma there. The stripes are processed in a downstream configuration.

Due to the use of microwaves the Plasma System GIGA 80 Plus provides for fast and damage-free plasma processing. In these plasma systems the plasma cleaning effect is based on chemical reaction of reactive plasma particles (radicals) guided through the downstream configuration. The jam detected system is easy to operate and features simple and fully automatically loading and unloading. The system software complies with standards in semiconductor industries. Due to the short process time the system can be fully integrated in any assembly line.

## Technical Data

### Process Chamber

Material	Aluminum
Inner dimensions	330 x 370 mm

### Vacuum System

Vacuum connection	DN 40 ISO K
Process gas control	2 gas channels standard, with MFC and solenoid valve
Base pressure	Approx. $1 \times 10^{-2}$ mbar
Process pressure	Approx. 0.01–2 mbar
Evacuation time	Approx. <10sec.
Vacuum gauge	Capacitance manometer, $10^{-3}$ to 10 mbar
Venting	Solenoid valve

### Plasma Source

Microwave Generator	
Frequency	2.45 GHz
Power output	0–1.000 W

## Performance Data

Uptime	>95 %
MTBF	>500 h
MTTR	<2 h

## System Control

Controller	Industrial PC Controller 17" TFT touch screen operation
Interface	USB, Ethernet and RS232
Software	Manual and automatic operation, graphical user interface (according SEMI E95), process status with all parameters, QNX real time operation system, multiple recipe storage, plain text error messages and warnings, software safety interlocks, etc. Optional SMEMA 1.2 or SECS II interface

## Supplies

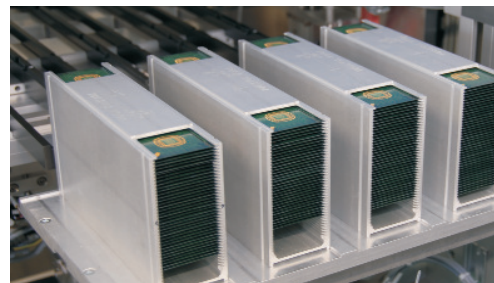
Electricity	For vacuum pump and system 3 x 230/400V, 15A, 50/60 Hz
Process gas	1/4" Swagelok connector, input 1–2 bar
Compressed air	1/4" Swagelok connector, input 4–6 bar

## Dimensions

W/H/D	Approx. 1.700 x 2000 x 1500 mm
Weight	750 kg (system only, excluding pump)

## Options

Gas channels	3-4
Vacuum pump	65 m <sup>3</sup> /h suction capacity oil filled or dry pump



Loading system

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