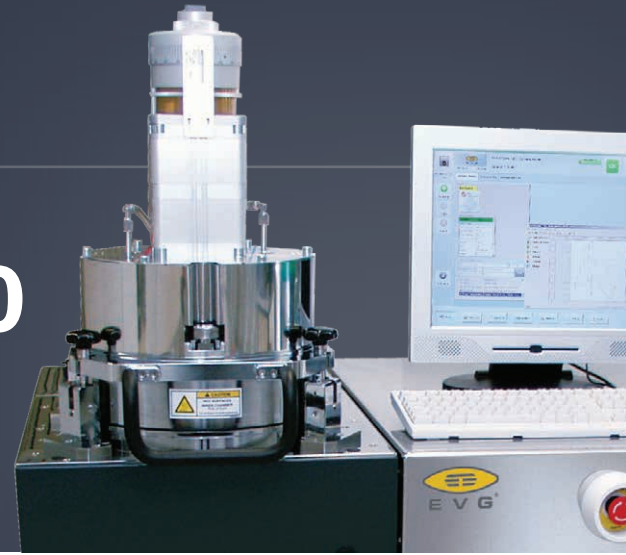




# EVG<sup>®</sup>501 / EVG<sup>®</sup>510

## Wafer Bonding System



### Introduction

#### Semi-automated wafer bonding system for R&D or low-volume production - fully compatible with high-volume-manufacturing equipment

The EVG501 / EVG510 is a highly flexible wafer bonding system that can handle substrate sizes from single chips to 150 mm (200 mm in case of a 200 mm bond chamber). The EVG501 / EVG510 can handle substrate sizes from pieces to 200 mm. This tool supports all common wafer bonding processes such as anodic, glass frit, solder, eutectic, transient liquid phase, and direct. The easy access bond chamber and tooling design allows for quick and easy retooling for different wafer sizes and processes with a conversion time of less than 5 minutes. This versatility is ideal for universities, R&D facilities, or low-volume production. The design of the bond chambers is the same on the EVG high-volume-manufacturing tools, such as the EVG GEMINI, and the bonding recipes are easily transferable, allowing for easy scale up of production volumes.

Technical Data	
Heater size / Minimum substrate dimension	150 mm: single chips / 200 mm: 100 mm
Max contact force	20 kN (EVG501) / 10, 20, 60 kN (EVG510)
Vacuum	Standard: 0.1 mbar Optional: 1E-5 mbar
Max. temperature	Standard EVG501: 450 °C Standard EVG510: 550 °C Optional EVG510: 650 °C
Single chips processing	Yes
Bond chuck system / Alignment system	150 mm heater: EVG <sup>®</sup> 610, EVG <sup>®</sup> 620, EVG <sup>®</sup> 6200 200 mm heater: EVG <sup>®</sup> 6200, SmartView <sup>®</sup> NT
Active water cooling	For bottom side
Power supply for anodic bonding	Max. voltage: 2 kV Max. current: 50 mA
Loading chamber	Manual

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### Features

- Unique pressure and temperature uniformity
- Compatible with EVG mechanical and optical aligners
- Flexible design and configurations for research and piloting
  - From single chips to wafers
  - Various processes (eutectic, solder, TLP, direct bonding)
  - Optional turbopump (<1E-5 mbar)
  - Upgradeable for anodic bonding
  - Open chamber design for easy conversion and maintenance
- Pilot and production compatible
  - High throughput with fast heating and pumping specifications
  - High yield through automatic wedge compensation
  - Open chamber design for easy conversion and maintenance
  - Smallest footprint for a 200 mm bonding system: 0.8 m<sup>2</sup>
  - Recipes are fully compatible with EVG's high-volume-manufacturing bonding systems

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