



**boschman**  
advanced packaging technology

## **SINTERSTAR SERIES**

Ag-sintering technology



# ABOUT BOSCHMAN

## Boschman is the one stop shop for highly innovative packaging solutions.

Boschman is a high-tech, solution driven Dutch company focusing on advanced packaging solutions. We provide a unique one-stop-shop concept – from idea to industrialization – offering her customers one point of contact for all packaging business. This approach ensures all processes to be carefully monitored and integrated, in order to create the most efficient and effective packaging solution and as short as possible time-to-market.

## Our industry focus

Our satisfied customers can be found in the following industries:

- Automotive
- Medical
- Avionics
- Mobile
- Industrial & Renewables

## Our application areas



**Mems & Sensors**



**2.5D/3D Packages**



**High Power Modules  
and packages**



**Smart Cards**



**Optical Packages**



## OUR PRODUCTS

### About Ag-Sintering Technology

Silver sintering is a proven die attach technology offering a void-free and strong bond with high thermal and electrical conductivity. It provides both high yield and high reliability. Boschman is market leader for Ag-Sintering services and equipment. Because we already supported many customers with solutions for many different applications, we have in-dept knowledge and experience. Thereby we make use of unique dynamic insert technologies and offer you in-house sinter tool design, manufacturing and testing. We offer any required industrial solution including e.g. clip-sintering.

Boschman offers two categories of Ag sintering solutions: for R&D, prototyping and low volume production we offer the Semi-automatic, Sinterstar Innovate series. And for efficient, high quality medium to high volume production the Sinterstar Auto and Inline series are the best choice. Our systems are capable of sintering a wide range of different devices: among others LED's, Power Devices Clip/heatsinks assemblies, solar (CVP) cells, custom designed power modules and more.



#### Sinterstar Innovate-F-XL

The most universal semi-automatic sintering system for all your green, lead free die attach technologies. The system is ideal for R&D and low volume manufacturing with high yield and high reliability.



#### Sinterstar Innovate-F-XL-WL

A universal semi-automatic sintering system for back-side wafer lamination



## OUR PRODUCTS

### Main Features Innovate:

- Precise temperature control up to 300 °C
  - Effective Sintering area 350x270mm
  - Clip Sintering capable
  - N2 protection integrated during the complete product handling and sinter process
  - Generic tooling possible for prototyping environment
  - Development of customer specific system enhancements
  - Capable to integrate customer specific processes
- such as hydrostatic or soft tooling
  - Fully characterized process and handling parameters
  - Closed loop precise pressure control and monitoring
  - Pressure applied only on areas where required
  - Guaranteed equal pressure for multi Die applications due to the patented Dynamic Insert Technology (DIT)
  - Enabling highest density tools with interspaces down to 400µm



### Sinterstar Inline-F-XL

The Inline-F-XL is an economic sinter system. The system has two external gripper systems for transporting the products automatically in and out of the sinter process area.



### Sinterstar Inline-F-XL-HC

The fully automatic Inline-F-XL-HC can be integrated in your automated assembly line. The system is equipped with preheating and cooling stations.



## OUR PRODUCTS



### Sinterstar Auto-F-XL-HC

The fully automated and stand-alone Auto-F-XL-HC works from cassette input to cassette output. The system is equipped with preheating and cooling stations.

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#### Main Features Inline/Auto:

- All specifications and values of the Sinterstar innovate series plus:
- Integrated pre-heating and cooling units possible
- Integrated cassette handlers
- Large list of system options for increasing production efficiency, process control and guaranteeing the best quality.
- Extremely long life-time of tooling resulting in very low running costs.
- Secs-Gem communication package for interfacing with a customer's MES system, production traceability and recipe management.
- Many options standard available for enabling fast change-overs, productivity improvements and quality assurance.

“ SMALLER, BETTER AND LOWER  
COST, WE REALIZE THE BEST  
PACKAGE FOR YOUR PRODUCT “



package  
development



assembly  
services



equipment

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