

**Power Electronic
Solutions**

Sintering Presses for Die-Attach

AMX Automatrix srl produces patented state-of-the-art sintering presses for Power Electronic Applications. AMX relies on their experience and customers to continually improve the technology. When designing the equipment, AMX accounts for the smallest details with the goal of simplifying the systems so they are easier to use.



P-50 Series

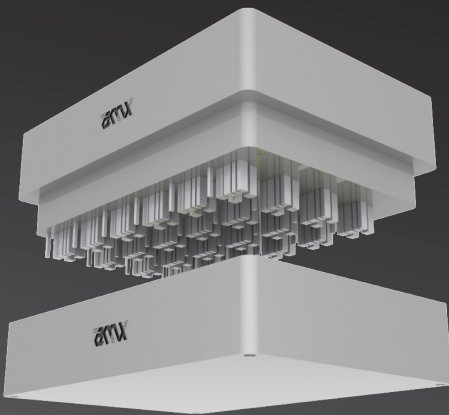


P-100 Series



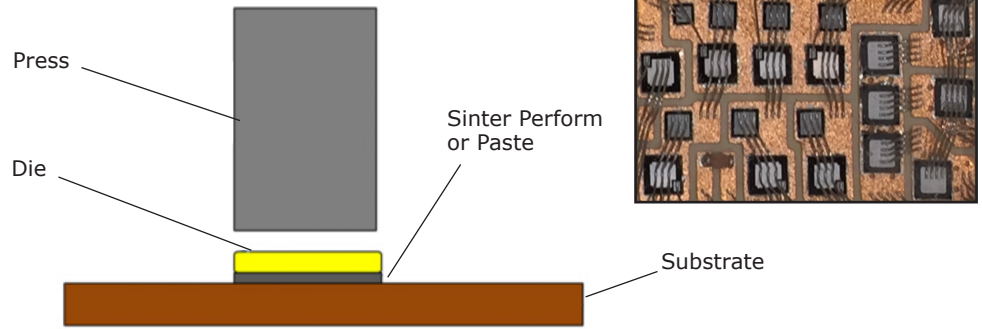
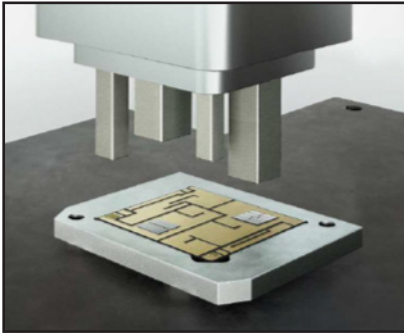
P-200 Series

Designed in Italy... Engineered for Performance



- **Multi-Punch Pressing** of each component on the substrate.
- **Uniform Pressure** on all devices, regardless of varying heights and substrate locations
- **Controlled Atmosphere** - Nitrogen, Forming Gas, Vacuum
- **Full Process Control** - Closed loop force system (for each punch) allows for individual die sintering parameters.
- **Full Traceability** Built into Software; Customizable for each customer
- **Quick Change Tooling and Process Changeover** - featuring innovative machine design and ease-of-use software
- **Manual (R&D), Semi-Automatic, and Fully-Automatic** Systems can be customized to each application.





Multi-stem pressing system, able to reach every single component on the substrate.

X-SINTERING

SPECIFICATIONS:

	<u>P-50 Series</u>	<u>P-100 Series</u>	<u>P-200 Series</u>
Weight:	150 - 350 kg	2100 kg	3300 kg
Dimensions:	600 x 650 mm up to 1000 x 1000 mm	1400 x 1400 x 2000 mm	1400 x 1600 x 1600 mm
Working Area:	75 x 75 mm up to 180 x 180 mm	180 x 180 mm	350 x 270 mm
Max Pressure:	40 MPa	40 MPa	40 MPa
Max Temperature:	320°C	320°C	320°C
Pressure System:	Hydraulic (up to 100kN)	Pneumatic (160kN)	Pneumatic (980 kN)

Silver Sintering provides Superior Device Performance and Reliability over conventional reflow solder. Argomax® by ALPHA® (MacDermid Alpha Electronics Solutions) is one example of an advanced bonding material based on Silver Sintering. After processing, Argomax acts as bulk Ag with a melting point of 962°C. The void-free, sintered joint provides both high thermal conductivity and high reliability at high currents and temperatures. The Sintering process itself is based on atomic diffusion - the atoms in the powder particles diffuse across the boundaries, fuse together, and create one solid joint.

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