

The LDP150 is an Electrical Press especially designed for bonding large light or radiation detectors (50 ~ 150 mm). It uses compression process at room temperature (thermo-compression option available).

A predefined gap can be achieved between two components previously pre-bonded using a high accuracy device bonder such as the SET FC150. The devices are pressed together at room temperature while preserving the initial high accuracy alignment and parallelism.

The LDP 150 is able to apply pressure up to 100,000 N.



Features & Benefits

- Self leveling sphere moving on air bearing and locked by vacuum preserves the initial parallelism of the component stack
- High force (up to 100,000N) and controlled force profile ensure bond join quality
- Granite base and rigid stiff steel structure maintain the initial high accuracy of the assembly XY : ± 1 µm Parallelism : ± 1 µm independent of component size

Bonding Processes

- Room Temperature Compression
- Thermo-Compression (optional)
- Bonding is achieved by pressing the components together with accurate control of the force profile
- Priority can be given either to the force or to the gap variation
- Parallelism and gap are monitored at all time during the bonding sequence

Applications

- Large Infrared Focal Plane Arrays (military or aerospace applications)
- Large XY, UV, detectors
- Others ...



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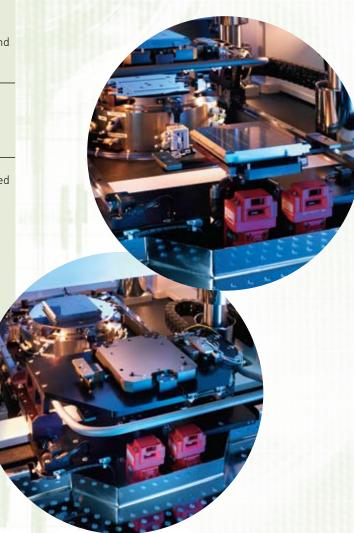
Technical Specifications

Process station	
Component Size / Tooling	g
Component Size	50 ~ 150 mm
Component Thickness	Up to 40 mm
Tool Thickness Planarity Vacuum Area	15 mm < 1 µm (application specific)
Bonding Arm: (Z-AXIS)	
Resolution	20 nm
Speed (maximum)	0.01 m/s
Bonding profile	Up to 10 Steps
	Each step includes ramp and plateau
Parallelism Sphere	
Travel	± 1.5 degrees
Pivoting torque On air bearing (active)	0.5 N.cm
Force Measurement	
Force range selected by F Sensor exchange is assis within around 30 minutes 10 kN Sensor Range Sensitivity Accuracy	sted by software and is achieved
<u>50 kN Sensor</u> Range Sensitivity Accuracy	500 ~ 50 000 N 50 N 500 N
<u>100 kN Sensor</u> Range Sanaitivity	1 000 ~ 100 000 N

Range Sensitivity Accuracy

1 000 ~ 100 000 100 N 1 000 N

General CharacteristicsMachine Footprint1415 mm x 1240 mmMachine height1820 mmMachine Total weight2300 kgElectrical Power Supply208 V/230 V - 13 A
50/60 Hz - 3 phases



*Process or Configuration Dependent

Data, design and specifications depend on individual process conditions and can vary according to equipment configurations. Not all specifications may be valid simultaneously. Illustrations, photos and specifications in this datasheet are not legally binding. Specifications are subject to change without prior notice.

S.E.T.

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