

**AUTOMATED SEMICONDUCTOR PROCESSING SYSTEM****ABSTRACT**

An automated semiconductor processing system has an indexer bay (75) perpendicularly aligned with a process bay (94) within a clean air enclosure (54). An indexer (72) in the indexer bay provides stocking or storage for work in progress semiconductor wafers. Process chambers (68,70) are located in the process bay. A process robot (66) moves between the indexer bay and process bay to carry semiconductor wafers to and from the process chambers. The process robot has a robot arm (225) vertically movable along a lift rail (254). Semiconductor wafers are carried offset from the robot arm, to better avoid contamination. The automated system is compact and requires less clean room floor space.



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