



TRAY AUTOMATION

The Jonas & Redmann Tray Automation is a highly developed modular machine platform designed for the loading and unloading of process equipment based on an in-line concept, where the wafer transport is effected by flat carriers or trays. The modular system can easily be adapted to the special requirements of the respective process, for example the atomic layer deposition, ALD, for the deposition of ultra-thin passivation layers (e.g. Al₂O₃), the ion implantation or the plasma enhanced chemical vapor deposition, PECVD, for the deposition of amorphous or microcrystalline silicon layers. In addition to a wide range of options, this machine platform offers a series of innovations that serve outstanding wafer positioning accuracy, the reduction of wafer breakage and the uncompromising gentle handling to protect thin films.

- best-in-class tool with highest capacity (wafer/ hour) available on the market
- the modular design facilitates installation and start-up as well as the integration into existing production lines
- machine platform compatible with a wide range of process equipment based on an in-line concept e.g. PECVD, CVD and PVD
- requires a comparatively small footprint
- highest tray Alignment accuracy based on the Row-stepwise Positioning
- separate wafer position alignment based on optical wafer position measurement

machine platform for automated loading and unloading of in-line process equipment

The system is available in numerous different versions and can be configured to meet the specific process and capacity requirements, as well as varying degrees of automation.

	configuration	options
material input/ output	wafer carrier (e.g. Jonas & Redmann Automation Carrier)	interlinking to automated carrier transport in-line connection to process equipment
process control/ measurement	breakage sensor check on input side	color and thickness layer measurement and reject handling in max. 4 bins pocket empty control thermal expansion tray measurement breakage sensor check on output side
tray type	6x4 - 5x4, 6x7, 6x9 carbon, graphite, stainless-steel	other tray formats on request
software	standard HMI, operator language English	other operator languages on request MES connection, e.g. Secs GEM, XML according Semi PV02
interface	single end	double end tray buffer e.g. perfect adaption to: Meyer Burger, Von Ardenne, ALD
wafer/ hour depending on process tool	up to 6,500	