

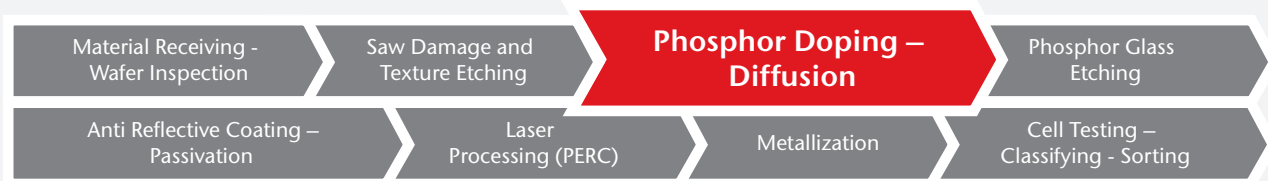


WAFER HANDLING DIFFUSION

Forming the p-n junction is one of the key processes for modern high-volume solar cell production facilities. In silicon wafer based solar cell technology, this is achieved by diffusing phosphorus atoms into pre-doped wafers, forming an n-type emitter. For more than 15-years, **Jonas & Redmann** has been delivering high-performance automation equipment for this key process step. Today, our WHD system is the industry standard for automating batch-type tube diffusion furnaces.

- high performance loading and unloading quartz process boats
- compatible with all tube diffusion furnaces on the market
- modular design that is flexible for many factory situations and requirements
- proprietary handling technology that ensures the lowest breakage rate and the highest throughput – up to 8000 wafers / hr.

Features and Options



MATERIAL INPUT/ OUTPUT	PROCESS CONTROL/ MEASUREMENT	LOADING TYPE	BOAT TYPE	SOFTWARE	FURNACE INTERFACE
Wafer Carrier (e.g. Jonas & Redmann Automation Carrier)	sheet resistance measurement others on request	Front-to-Back or Back-to-Back	Square or Diamond Full pitch, Half pitch, flexible pitch transfer 100/200/250 /500 slots	Standard HMI, operator language English, Chinese, others MES connection: Secs GEM, XML Semi PV02	Belt-to-belt interface, Slider interface
WHD Loading/ Unloading by Operator or Interlinking to automated carrier transport system					Stand alone
					Boat changer , TWIN module , dual furnace interface

Products (customized configuration on request)	Configuration												Performance wafer/hr		
	Wafer transfer			Boat slots					Furnace interface						
	Square	Diamond	Back-to-back	Full pitch	Half pitch	100 slots	200 slots	250 slots	500 slots	Belt-to-belt	Slider	Manual boat input		Boat Handling	
WHD-FP	s	o	o	s			s	o		s					2400
WHD BtB HP Diamond		s	s		s				s	s			Boat Changer		4000
WHD STA	s	o	o	s		s	o					s	Boat cart		4000
WHD TWIN	s	o	s	o			s	o		s			2-Furnace—TWIN module		4000
WHD Duplex		s	s		s				s	s			Dual furnace interface		8000

(s = standard, o = option)

One core machine + many options for your individual process requirements!