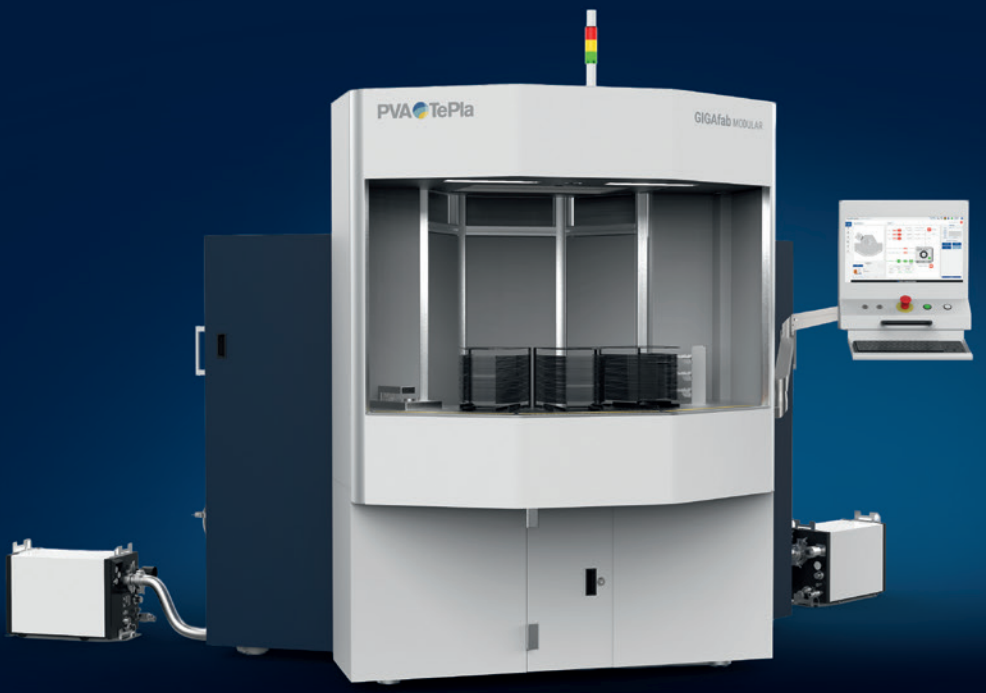
GIGAfab MODULAR

PRODUCT OVERVIEW

MULTIPURPOSE PLASMA SINGLE-WAFER SYSTEM



PVA TePla

ABOUT THE SYSTEM

ENHANCED AUTOMATION.
RELIABLE WAFER HANDLING.

High-mix production quickly pushes rigid, single-purpose equipment to its limits. The answer is a system that adapts to your process portfolio, not the other way around.

The GIGAfab Modular is designed for flexible single-wafer processing of wafers up to 200 mm in diameter. The system can be equipped with up to three process modules, allowing different applications and process chemistries to be combined in one platform. Wafers are loaded into up to three cassettes at the front of the handling module; the user assigns the required recipe to each cassette, and the integrated wafer handling robot transfers the wafers to the designated process module. During processing, the wafer rests on a temperature-controlled hot chuck, supporting the precise control of ashing and descum processes. After processing, the robot returns and sorts the wafers into their assigned cassettes, creating a defined wafer flow from loading through processing to unloading.

Start with one chamber, scale to three
Optional process modules add throughput as volume requirements grow, sharing one handling platform.

Safe and fully automated wafer handling
A robot moves each wafer to its process module and back again to its cassette.

Low-temperature resist ashing for wafers
Heated chuck from room temperature to 200°C, with uniform plasma across the full wafer.

- Cost-effective entry configuration with easy capacity expansion
- Application-specific process flexibility
- Efficient recipe-based production setup



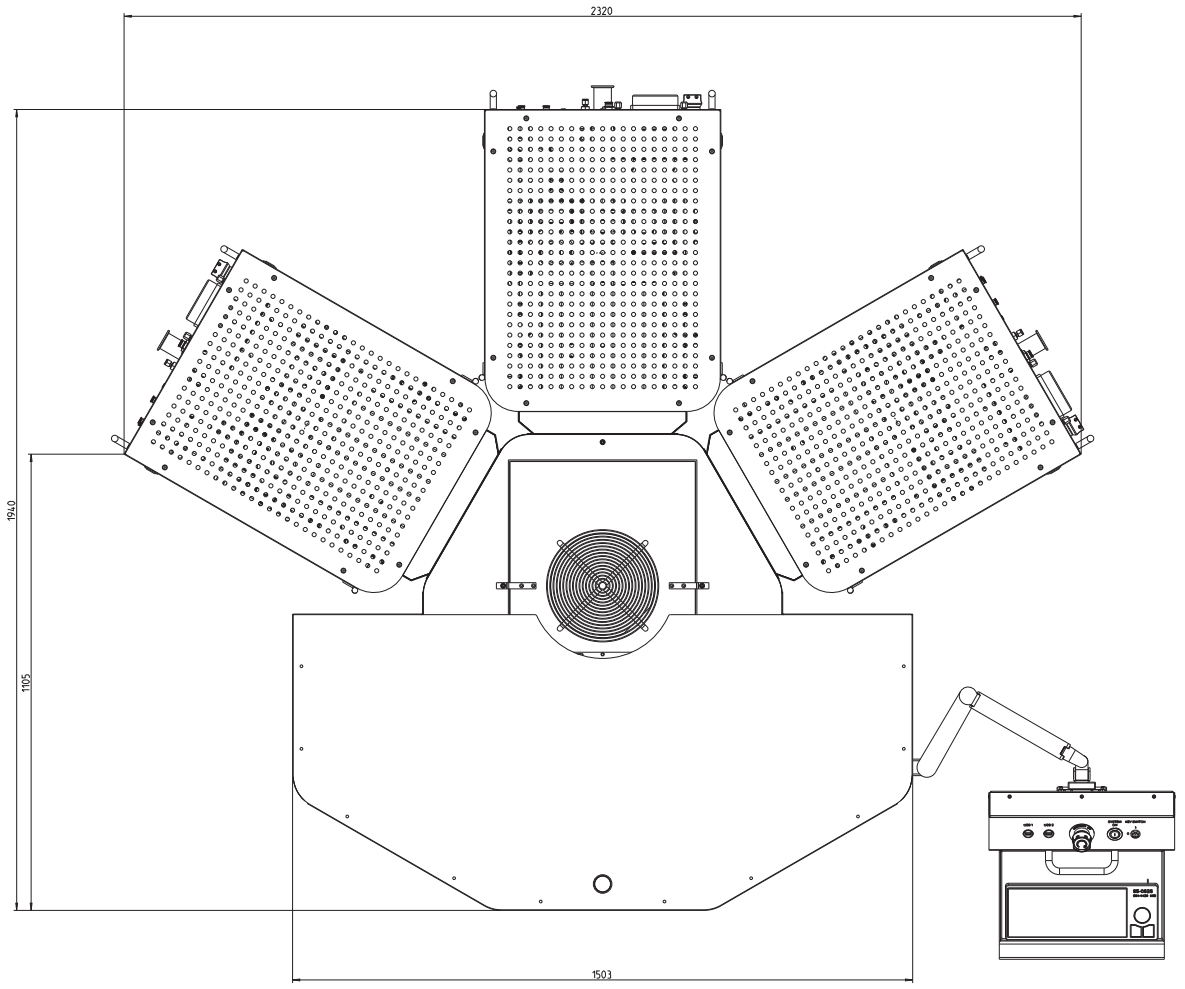
SPECIFICATIONS

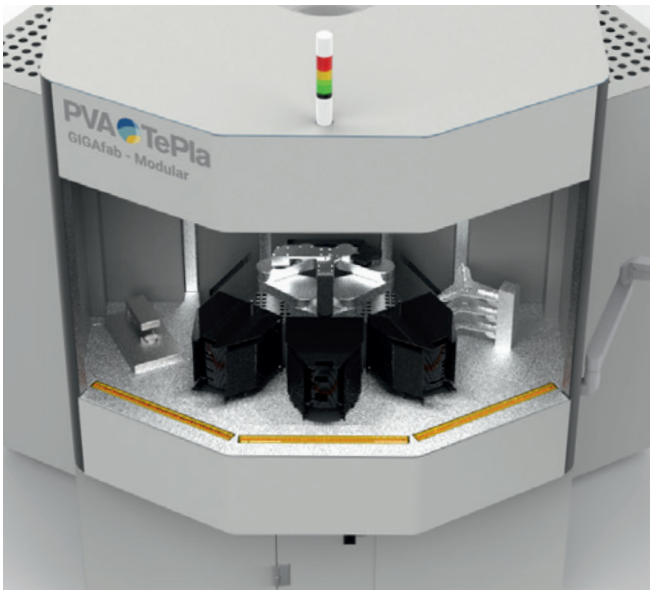
TECHNICAL PARAMETERS

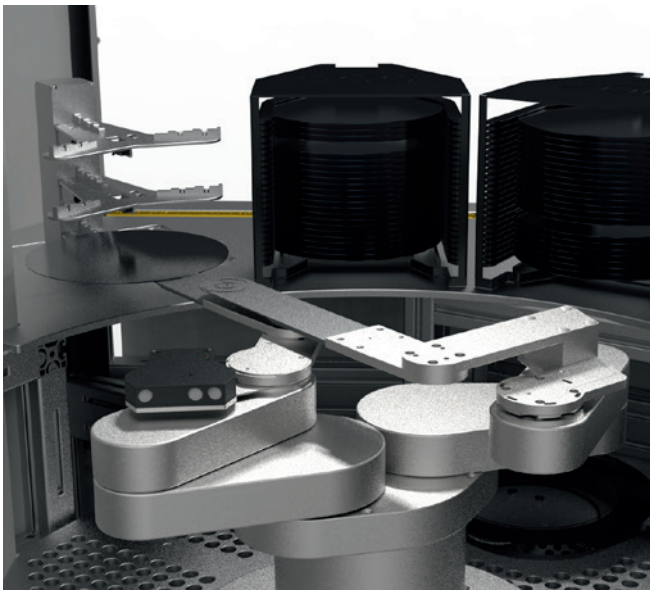
SPECIFICATIONS	
Process chamber	Aluminum
Process gas supply	2 gas channels included (optional 2 more)
Vacuum gauge	capacitance manometer
Pressure Control	Down stream control valve
Wafer size	100 mm, 150 mm and/or 200 mm
Plasma generation	Microwave source (2.45 GHz), maximum power 1000 W
End Point Detection	Optical emission EPD & Plasma verification
Control hardware	■ PC based system (Windows 10 IoT) controller with 18,5" touchscreen and graphical user interface ■ Ethernet, USB, RS232 interface ■ Light tower for system status R/Y/G with buzzer
Program Features	Manual or automatic operation, user password, multiple recipe storage (1–10 steps each), self test routines, warning and error messaging
Process Tracking	Real time monitoring, on-screen display of graphic plots, data logging, export of process data
Standards	CE-certified, Semi S2/S8 compliant
SUPPLIES	
Electricity	230/400 V, 50/60 Hz, 3 Phase, N, PE, 3 x 25 A (installed power approx. 12 kW)
Process Gas, Vent	1–2 bar (15–30 psi), 1/4" Swagelock
Compressed Air	DN9 FESTO hose connector, 5–6 bar
Vacuum	DN4 FESTO hose connector
DIMENSIONS	
Width x Height x Depth	2100–2600 x 2250 x 1600–2000 mm (83–102" x 89" x 63–79")
Weight	520–960 kg (1150–2120 lbs)
CONFIGURATION OPTIONS	
Optional features	■ 2 additional process chambers ■ 2 additional gas channels (per process chamber) ■ Down-stream plasma screen (per process chamber) ■ Ebara vacuum pump ■ Pre-aligner ■ Cooling station ■ Wafer reader

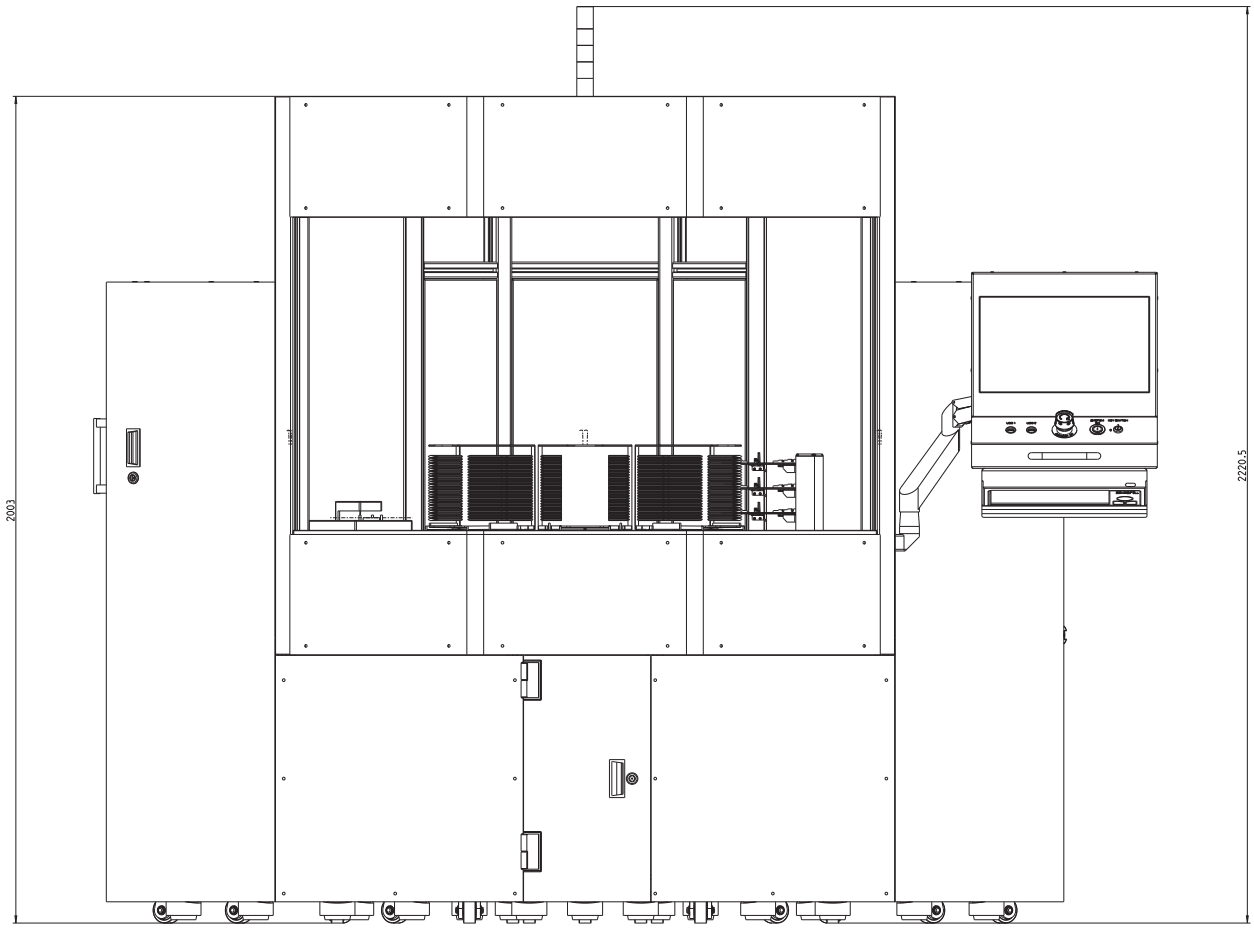
SPECIFICATIONS

DIMENSIONS





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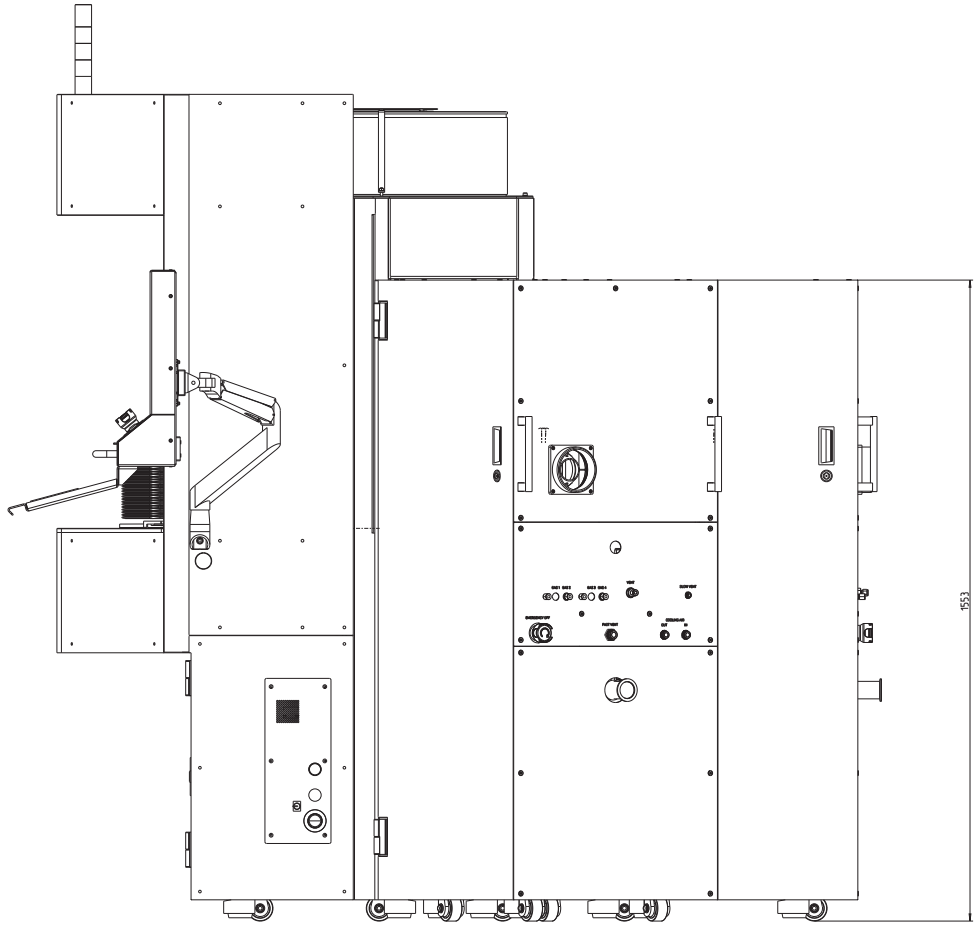
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