DESIGNED FOR HIGH PERFORMANCE IN PRODUCTION ENVIRONMENT
WHILE STAYS EFFICIENT AND ECONOMIC

SVFur-FPx

Features and Benefits

- Maintenance friendly mechanical design
- State of the art modular control system, in-house designed and manufactured
- 10,4“ high-res touchscreen for operator interface
- Up to 4 stacked quartz or SiC tube reactor chambers for various processess
- No thermal interference between different tubes
- Contactless fully automated boat-in-tube loading both cantilever or softlanding configurations
- Independent tube level control system
- HW safety interlocks independent on main CPU
- HEPA or ULPA filtres installed in load station
- Boat elevator and wafer handling automation
- UHP face seal fittings and welds for connections
- UHP orbital weldings made in 100/10 Cleanroom

Processes

Atmospheric

- Diffusion (drive-in) high temperature processes
- Doping from solid, liquid and gaseous dopant sources e.g. BBr_3, B_2H_6, $POCL_3$, PH_3, BN
- Various thermal processing e.g. annealing, sintering
- Pyrogenic wet Oxide with EBS
- Wet Oxide with ultra pure steamer
- Dry Oxide
- HiPOx (High Pressure Oxide)

LPCVD

- Silicon nitride
- Low temperature oxide (LTO)
- High temperature oxide (HTO)
- TEOS oxide
- Polysilicon, with tilt/flat temperature profile
- Doped polysilicon
- Oxynitride

PECVD

- Silicon nitride (incl. anti-reflective SiN solar cell coating)
- Silicon oxide
- Oxinitride

DCE or HCl optional for all processes

Full Production **Horizontal Furnaces**

Technical Data

Sample dimensions W x D x H (mm)	5600 x 2600 x 1000
Wafer size (mm)	150, 200, 300 or any custom size
Wafer load	100+
Heating system	3 or 5 zone
Flat zone	Up to 1067 mm (42")
Process temperature	200°C to 1300°C, ± 0.5°C across flat zone
Power consumption	18kW - 30kW per tube
Power supply (adapted to power grid of destination country)	150 mm: 3-phase, 400 or 480VAC, 140A, 50 or 60Hz 200 mm: 3-phase, 400 or 480VAC, 160A, 50 or 60Hz
Clean dry air	70 – 110 psig (4,8 to 7,6 bar)
Cooling water	40 – 60 LPM
Exhaust	210m³/h per tube
Options	Boat elevator and wafer handling automation

Wafer Handling Automation for easy operation

Partial automation

- Stand-alone cassette to boat wafer transfer system

Full automation

- Boat elevator
- Fully automated stocker with built-in elevator and wafer transfer system

Typical configuration for Boat Elevator is 5 boats each with 50 slots each (200 mm wafers) and 6 boats (150 mm wafers).

In case of stocker, the system includes built-in wafer handling robot and the boat elevator. The stocker is integrated into the horizontal furnace and stores loaded and unloaded cassettes for a smooth continuous and fully automatic furnace operation.