centrotherm
thermal solutions

Horizontal Furnace for High Process Performance



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E 2000 Horizontal Production Furnace

Designed for low cost productivity and furnace platform flexibility

The design of the centrotherm E 2000 system supports the multiple process capability needs of a maximum capacity, high process performance user and provides all the features of full production in a full size, easy-to-maintain, safe and reliable horizontal furnace platform.

The centrotherm design is outstanding for high performance, small footprint and low cost of ownership while offering high process flexibility required for multiple applications.

Processes

- Atmospheric Processes

Diffusion	Curing
BBr_3-, B_2H_6-Doping	Activation Annealing
$POCl_3$-Doping	Silicidation
H_2-, N_2-Annealing	Nitridation
Wet-, Dry-Oxidation [Option: DCE, HCl]	Contact Sintering

- LPCVD Processes

Polysilicon	TOMCAT
Polysilicon-Doping	LTO
Silicon Nitride	HTO
Oxinitride	SIPOS
TEOS	Low pressure deposition of passivation

- PECVD Processes

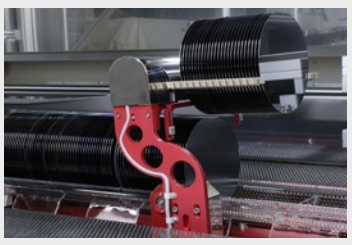
PECVD-Oxide	PECVD-Nitride	PECVD-Oxinitride



centrotherm E2000

Features and Benefits

- up to 4 stacked quartz or SiC tube reactor chambers [up to 300 mm 4 stack possible]
- process selectable chamber options available
- fully automated cassette-to-cassette loading for processing up to 200 mm wafers
- advanced water cooling system: no thermal interference between different tubes, no consumption of clean room air
- clean automated boat loading for premium processing of up to 200 mm wafers
- modular component design for ease of installation and start up in clean room facilities



Fully automated cassette-to-cassette production up to 200 wafers per tube

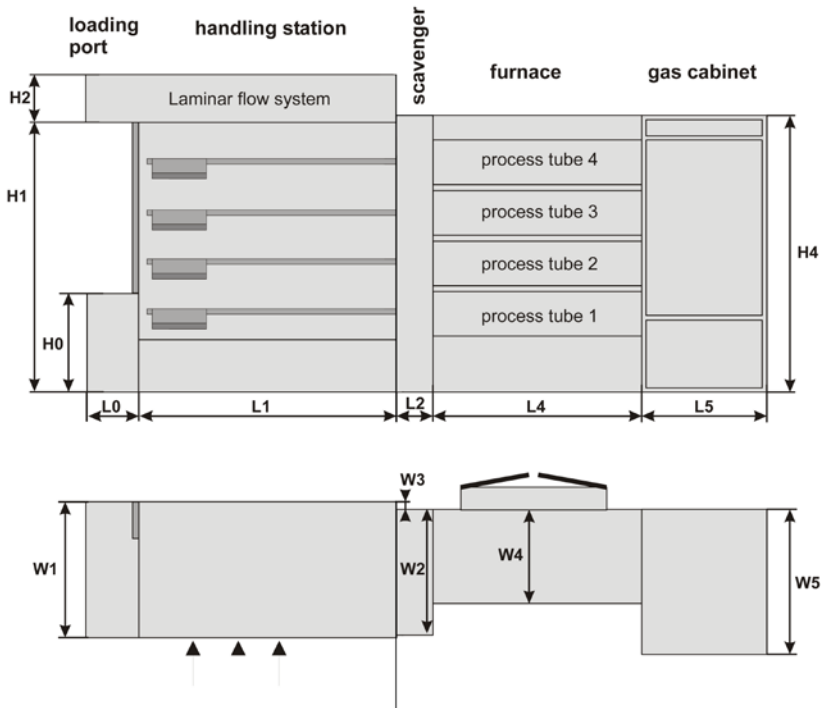
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Dimensions



L0:	500 mm [19.7"]			H0:	950 mm [37.4"]
L1:	2520 mm [99.2"]	W1:	1310 mm [52.8"]	H1:	2680 mm [105.5"]
L2:	350 mm [13.8"]	W2:	1225 mm [48.3"]	H2:	520 mm [20.5"]
		W3:	145 mm [5.7"]		
L4:	2000 mm [78.7"]	W4:	800 mm [31.5"]	H4:	2650 mm [104.3"]
L5:	1200 mm [47.2"]	W5:	1400 mm [55.1"]		

Preliminary size I real dimensions in customized layout I customized dimensions upon request

Technical Data

Wafer sizes	150 mm [max. 200 wafers] 200 mm [max. 150 wafers] I 300 mm [max. 75 wafers]
Heating system	3 or 5 zone 900 mm to 1000 mm flat zone ± 0.5 °C across flat zone
Process temperature	200 °C to 1300 °C
Possible process gases	H_2, Ar, O_2, N_2O, N_2, SiH_4, NH_3, B_2H_6, PH_3, SiH_2Cl_2
Power consumption	95 kW [heating cassette with Ø 290 mm at 1000 °C]
Power supply	400 V, 140 A [system will be modified to country-specific power supply]
Dry air	600 – 1000 kPa
Cooling water	50 – 70 LPM
Exhaust	200 m³/h per tube

Options

- boat elevator and wafer handling automation

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centrotherm reserves the right to make changes in the product specification at any time and without notice