centrotherm
thermal solutions

Horizontal Furnace for High Process Performance

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equipment

process

solutions

E 1200 R&D Furnace

Designed for low cost productivity and furnace platform flexibility

The centrotherm E 1200 small batch laboratory system supports the multiple process capability needs of a low volume and high process performance user with all the features of full production in a reduced footprint.

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

centrotherm E 1200

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 I HTO I SIPOS
Silicon Nitride	Antireflective Coatings
Oxinitride	Low pressure deposition
TEOS	of passivation

- PECVD Processes

PECVD-Oxide PECVD-Nitride PECVD-Oxinitride

Features and Benefits

- up to 4 stacked quartz or SiC tube reactor chambers
- process selectable chamber options available in 3 or 4 stack configurations
- clean automated boat loading
- premium processing of small batch Si or alternate substrates
- advanced water cooling system: no thermal interference between different tubes, no consumption of clean room air

Clean automated boat loading and premium processing of small batch Si or alternate substrates guaranteed

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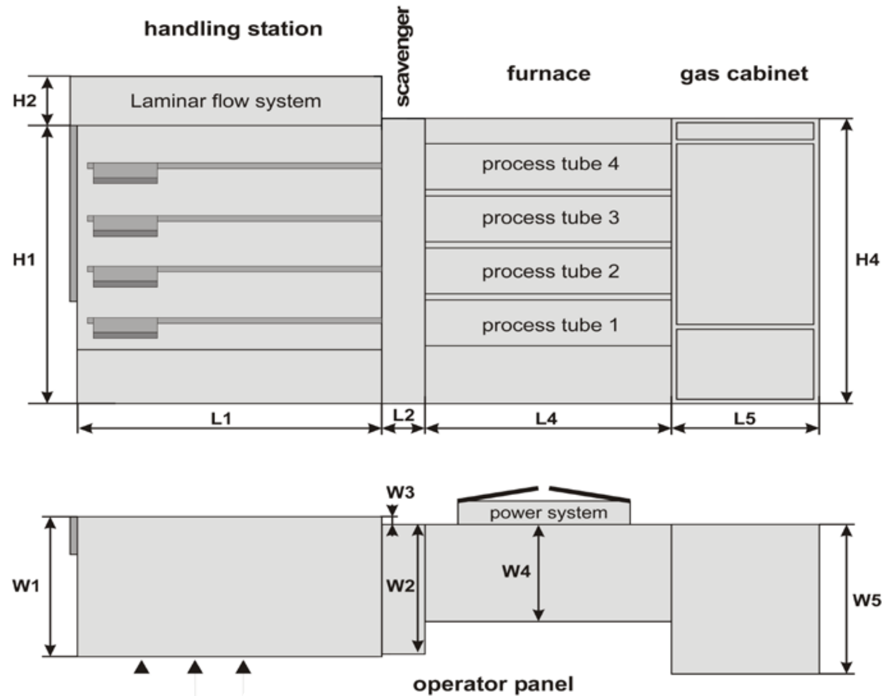
Dimensions



Vertical laminar flow					
L1:	1600 mm [63.0″]	W1:	1010 mm [39.8″]	H1:	2680 mm [105.5″]
L2:	350 mm [13.8″]	W2:	1225 mm [48.2″]	H2:	520 mm [20.5″]
		W3:	145 mm [5.7″]		
Horizontal laminar flow					
L1:	1620 mm [63.8″]	W1:	1205 mm [47.4″]	H1:	2525 mm [99.4″]
L2:	350 mm [13.8″]	W2:	1225 mm [48.2″]	H2:	470 mm [18.5″]
		W3:	340 mm [13.4″]		
L4:	1200 mm [47.2″]	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. 50 wafers] I 200 mm [max. 25 wafers]
Heating system	3 zone 300 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	55 kW [heating cassette with Ø 260 mm at 1000 °C]
Power supply	400 V, 80 A [system will be modified to country-specific power supply]
Dry air	600 – 1000 kPa
Cooling water	50 – 70 LPM
Exhaust	400 m^3/h

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