

# 研究開発用実験炉 製品ガイド

High-temperature vacuum furnace

【カーボン炉、タングステン炉】(内熱式)

1inch

2inch

3inch

4inch

6inch

8inch

手動制御

## Mini-BENCH



**Max 2000C**

CCC heater element  
Vacuum or Inert Gas

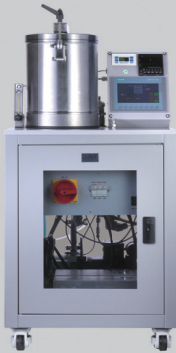
- A) Chamber
- B) Temperature Controller/PSU
- C) Vacuum equips (Pump, valves & Gauge)

\* TBD

\*A + B is minimum configuration. C is also acceptable if requested.

セミオート PLC 自動シーケンス

## Mini-BENCH-prism



**Max 2000C**

CCC heater element  
Vacuum or Inert Gas

- 7inch Touch panel HMI
- PLC auto sequence: Pump/purge cycle & Vent
- Pump/gauge, DC PSU are all stored in cabinet
- Plug and play
- Lid open/close: momentary switch
- Safety option:
  - Water flow meter
  - Chamber thermostat
  - Pop off valve
  - EMO

Compact footprint: 603 (W) x 603 (D) x 1171 (H) mm

1inch

2inch

3inch

4inch

6inch

8inch

セミオート PLC 自動シーケンス ウエハーアニール炉

## MiniLab-WCF (Max 2000C) Max 2000C

- \*APC control, high temperature wafer annealing**
- max 8inch wafer annealing
  - Dual zone, 'master-slave' precise heater control
  - Over heat protection, sample temperature monitor
  - PLC auto sequence, Plug and play

1240 (W) x 535 (D) x 1667 (H) mm \*exclude pump



# 研究開発用実験炉 製品ガイド

High-temperature vacuum furnace

## 【石英反応管縦型炉】（外熱式）

1inch

2inch

3inch

4inch

6inch

8inch

手動制御

### TVF-110, Vertical furnace



#### Max 1200C

Quartz reactor, clean wafer annealing  
Vacuum or Processing gases

Heater: Kanthal element  
Wafer size: 1~4inch  
K type thermocouple

Quartz wafer susceptor  
Manual load, manual z-shift lift up

## 【石英反応管（横型）】 ホットウォール式 熱 CVD（外熱式）

1inch

2inch

3inch

4inch

6inch

8inch

手動制御（APC 圧力コントロール）

### Nanofurnace, Model. BWS-NANO

for Carbon Nanotube, Graphene synthesis, ZnO nanowires.



#### Max 1200C

Hot wall type T-CVD  
3 x MFC: CH<sub>4</sub>, Ar, H<sub>2</sub>  
1 x MFC for bubbler

APC pressure control with precise capacitance manometer  
Rotary Pump  
'Lab View' software

# 研究開発用実験炉 製品ガイド

High-temperature vacuum furnace

## 【ウエハーアニール装置 (カスタムメイド真空チャンバー)】 (内熱式)

1inch

2inch

3inch

4inch

6inch

8inch

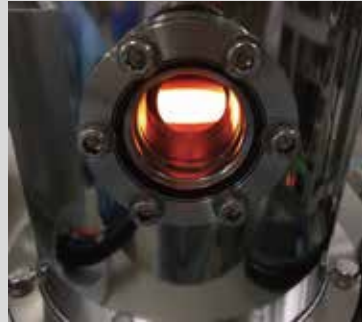
手動制御

### Custom made chamber with substrate heater

Customer made vacuum chamber, Substrate Heater, vacuum equipments.



Φ4inch\_1200C, SiC coated heater



Vacuum chamber, front view port

We provide bespoke solutions for annealing system, heating applications that cannot be fulfilled using standard products. These systems, heaters can be any shape to suit your application.

## 【ウエハーアニール装置 セミオート制御, APC 圧力コントロール】 (内熱式)

1inch

2inch

3inch

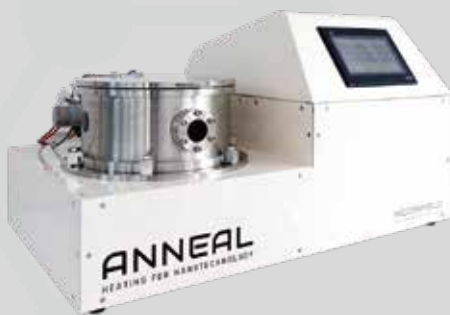
4inch

6inch

8inch

セミオート PLC 自動シーケンス (APC 圧力コントロール)

### ANNEAL by Moorfield



#### Max 1000C

3 types of heating element options;

- Halogen lamp heater (600C)
- CCC heater (1000C)
- SiC coated CCC (1000C)

7inch Touch panel HMI

PLC auto sequence: Pump & Vent cycle

3 x MFC' s  
Precise pressure control  
Capacitance manometer, high-resolution pressure control

Wafer size: 4inch and 6inch  
K type thermocouple  
Turbo Pump with RP (or Dry scroll) backing pump