# MBE system

## RC1100

MBE system (RC1100) supplied to Hokkaido University

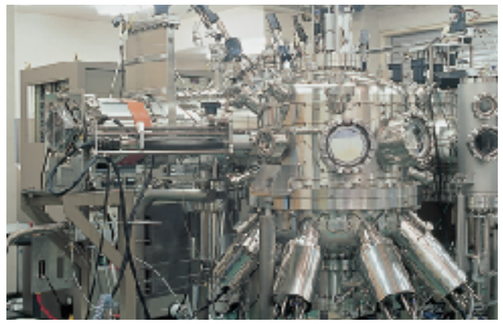
### Features

RC1100 Series is a low-cost, space-saving and high performance MBE system for research purpose. For all its compact-size, it is adequate for full-fledged research. The combined use with an analyzer like STM system provides a way for the development of new materials.

### Specifications

- Substrate size : 1 × φ1"
- K-Cell ports : 6 × ICF114

## RC2100/RC3100



MBE system (RC2100) supplied to Sophia University

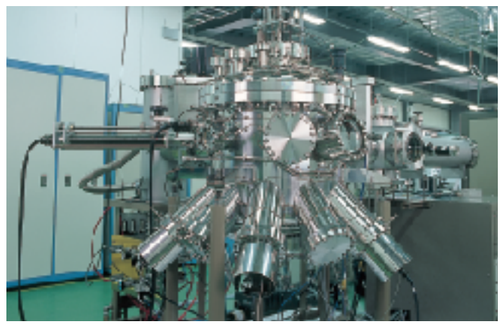
### Features

RC2100/RC3100 Series is an MBE system optimum for higher level of research and semi-production. This system supports the use of a variety of materials such as Nitride, ZnO.

### Specifications

- Substrate size : 1 × φ2" (RC2100)
  1 × φ3" (RC3100)
- K-Cell ports : 8 × ICF114 (RC2100)
  8 × ICF152 (RC3100)

## RC6100



MBE system (RC6100) supplied to National Institute of Advanced Industrial Science and Technology

### Features

The K-Cell-substrate arrangement designed by the most advanced molecular beam simulation technology achieves extremely uniform crystal growth on a large-area substrate.

### Specifications

- Substrate size : 1 × φ6"
- K-Cell ports : 10 × ICF152

## MBE System Specifications

| | Model | | RC1100 | RC2100/RC3100 | RC6100 |
|---|---|---|---|---|---|
| Growth Chamber | Ultimate Pressure (Pa) | | $<1.33\times10^{-8}$ | $<1.33\times10^{-8}$ | $<1.33\times10^{-8}$ |
| | Substrate (wafer) size | | 1 × φ1" | 1 × φ2" / 1 × φ3" | 1× φ6" |
| | Substrate temperature (T. C. Value for control) | Standard | 900℃ | 900℃ | 900℃ |
| | | Optional | 1200℃ | 1200℃ | 1200℃ |
| | K-Cell ports | | 6 × ICF114 | 8 × ICF114 / 8 × ICF152 | 10 × ICF152 |
| | Beam flux monitor | | Standard | Standard | Standard |
| | Ion Pump | | 270l/sec | 500l/sec | 500l/sec |
| | Turbo Molecular Pump | | Optional | Optional | Optional |
| | Cryo Pump | | Not Available | Optional | Optional |
| | RHEED (30keV) | | Standard | Standard | Standard |
| | RHEED screen size | | ICF152 | ICF152/ICF203 | ICF203 |
| Transfer Chamber (With Transfer Rod) | Ultimate Pressure (Pa) | | $<1.33\times10^{-7}$ | $<1.33\times10^{-7}$ | $<1.33\times10^{-7}$ |
| | Combination Pump | | 150l/sec | 150l/sec | 150l/sec |
| | Transfer system | | Transfer Rod | Transfer Rod | Transfer Rod |
| | Rail transfer system | | Optional | Optional | Optional |
| Transfer Chamber (With arm transfer system) | Ultimate Pressure (Pa) | | $<1.33\times10^{-7}$ | $<1.33\times10^{-7}$ | $<1.33\times10^{-7}$ |
| | Combination Pump | | 300l/sec | 300l/sec | 300l/sec |
| | Transfer system | | Arm transfer system | Arm transfer system | Arm transfer system |
| | Extension ports (amount × size) | | 2 × ICF152 | 2 × ICF152 | 2 × ICF203 |
| Load lock Chamber | Ultimate Pressure (Pa) | | $<1.33\times10^{-5}$ | $<1.33\times10^{-5}$ | $<1.33\times10^{-5}$ |
| | Turbo Molecular Pump | | 300l/sec | 300l/sec | 300l/sec |
| | Pre-heating system (Max500℃) | | Standard | Standard | Standard |
| | Substrate stock stage (for up to 4 holders) | | Standard | Standard | Standard |
| | Transfer system Unnecessary in case of arm transfer system | | Transfer Rod or Rail transfer system | Transfer Rod or Rail transfer system | Transfer Rod or Rail transfer system |
| Control system | Operation panel | | Standard | Standard | Standard |
| | Alarm system | | Standard | Standard | Standard |
| | Inter lock system | | Standard | Standard | Standard |
| | Automatic Growth system (for shutter) | | Optional | Optional | Optional |
| | Automatic Growth system (for temperature) | | Optional | Optional | Optional |
| Others | Residual Gas Analyzers | | Optional | Optional | Optional |

## High temperature vacuum baking system

### Features

We are ready to offer design and manufacture of high-temperature vacuum baking system to meet various types of applications.

### Specifications

- Maximum heating temperature : from 1000℃ up to 2000℃
- Ultimate pressure : $<1.33\times10^{-4}$Pa ( using TMP )