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Securities code: 6258

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Announcement about development of Wafer Transfer Vacuum Robot and improvement of FOUP opener

Hirata is pleased to announce that we have developed Wafer Transfer Vacuum Robot for 300mm and 450mm wafers. We show this robot along with an improved FOUP opener for 450mm wafers at SEMICON Japan 2012 (*).

We manufacture and sell various production systems to automotive, semiconductors and home electronics industries. In the field of semiconductor-related production equipment, we manufacture and market Load Port which transfers silicon wafers to individual processing equipment, wafer transfer robots (atmospheric type and vacuum type), EFEM which integrates the Load Port and wafer transfer robots, sorter and vacuum platform.

We have developed a Wafer Transfer Vacuum Robot for 300mm and 450mm wafers. We believe that launching of this new product to the market, along with our improved FOUP opener for 450mm wafers, will meet customer needs in worldwide industrial field.

I. Wafer Transfer Vacuum Robot “AR-Wn series” for 300mm and 450mm wafers

The high-vacuum typed robot contributes to customers’ productivity resulting from high precision, high-speed motion, high reliability and numerous variations.

1. Product Features

1-1. High precision –Vibration reduced by 70-85%

-Adding a reducer-free Direct Drive motor suppresses vibration less than 0.1G, which is 70-85% less compared with our current model.

-Adopting steel belt suppresses lateral vibration and improves straight-running performance more than 50% compared with our current model.

1-2. High-speed motion – better throughput by 30%

-The speed motion increases at an average rate of 20% on each axis. Smart motion control

technology with smooth movement also allows for shortening transfer time compared with our current model, resulting in better throughput by 30%.

1-3. High reliability & measures to risk avoidance

- Collision detection minimizes damage to arm and time to restore.
- Placing partitions around a direct drive motor separates to atmosphere and vacuum area. Separating areas enables to reduce the number of magnetic liquid seal and prevent the scattering for magnetic fluid in chamber.
- Adopting alpha pad for stable wafer grasping enables to reduce wafer damage under high-speed motion and more stable grasping compared with the conventional grasping mechanism.

1-4. Various Arm Lineup

- Different types of arms, coping with various working environment, are lined up.

1-5. Easy maintenance

- Removing battery from the main body and the controller achieves easy maintenance.

1-6. Provision of Vacuum platform

- This product, which is the combination of EFEM and vacuum cluster tool as vacuum platform is available. This would lead equipment manufacturers to have enough time to specialize in their own process and improve their productivity.

2. Appearance



II. FOUP opener for 450mm wafer KWF series

The functions have been improved from our current model.

1. Product Features

1-1. Competitive price

- The product with competitive price is available (open pricing)
- With the function cultivated at 300mm and simpler mechanism, maintenance is much easier.

1-2. Accommodating various types of carriers

- It accommodates FOUP and MAC as standard.

1-3. Abundant variations

- Systematizing customer specifications such as mapping (checking the presence of wafers), N2 purge (nitrogen filling), turntable and so on cover abundant variations.

1-4. High reliability with actual achievement

- High reliability is achieved by accumulated technology of 300mm load port (MCBF: 1,000,000 cycles)
- Double or crossed wafers are detected by high precision mapping.
- Latch over-rotation function closes carries completely.

2. Appearance



III. Effect on Business

Those products are expected to contribute to the improvement of financial results for the next fiscal year (FY ending March 2014) by increasing sales of semiconductor production facilities.

IV. Contact Information

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(*) SEMICON Japan 2012

The largest international exhibition of semiconductor equipment and materials held at Makuhari Messe in Chiba from December 5 to 7, 2012.