Adenso will give a live presentation of three world firsts in vacuum wafer handling.

At SEMICON EUROPE 2018 (13 - 16.10.) in Munich, Adenso will give a live presentation of six innovations in the field of wafer handling in a vacuum – including three world firsts!

Adenso managing director Uwe Beier: “Separately or in combination, the new Adenso wafer handling modules are an important milestone on the road to lean product development in Industry 4.0 and the Internet of things.”

Together with the unveiling of the new WHM300X wafer handling module, Adenso will showcase the following six modules for 300 mm wafers, the first three of which are world firsts:

1 **STEALTH CARRIER** for low-temperature applications – thermally near-invisible substrate carriers for temperature ranges of up to 4K. Low process temperatures require huge technological and energy resources – and the results are highly susceptible to external influences such as thermal radiation. These new, thermally near-invisible substrate carriers not only save valuable process time and energy, but also significantly reduce error frequency. Their exceptionally low thermal mass means that their temperature can be controlled very quickly, which saves time and energy.

2 **WHR handling robots with up to four end effectors** (a maximum of two EEs is standard on the market) for maximum productivity and flexibility in the smallest of spaces. The ability to install up to four end effectors on one vacuum robot enables extremely high throughput rates and unprecedented flexibility regarding the substrates that can be processed. It is now finally possible in serial operation for a whole range of substrates to be tested and processed cost-effectively without set-up times and in any order – starting from a quantity of 1.

3 **FOUP300 VAC LoadPort** – for the direct infeed/outfeed of 300 mm wafers in vacuum systems without (!) the atmospheric handling that has always been standard practice – this saves up to 80% space in the clean room! The direct infeed/outfeed of wafers into and out of the high vacuum meets customer requirements for maximum flexibility with mass-production costs – starting from a quantity of 1. Customer-specific substrates can now be processed just like mass-produced ones – and at the same economic costs!

4 **LLM330** – compact LoadLockModule for research and production

5 **WAM300** – wafer alignment module for automatic wafer alignment within the vacuum environment

6 **MLL300** – temperature-controlled lock for the manual removal of samples

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In the field of wafer handling solutions, Adenso – which is part of Silicon Saxony – offers a range of products for substrate handling in vacuums and glove-box systems. Adenso robot solutions for high-vacuum environments possess a range of unique characteristics, which means that these solutions are used all over the world and are valued for their reliability, especially in semiconductor production.

The highly successful Adenso concept for VacBots offers customers a needs-based, tailored solution comprising existing or modified vacuum robotics modules.

The basic layout + wafer handling robot + wafer handling module + LoadLock module together create a turnkey product with defined interfaces. As a result, wafers of up to 450 mm, loads of up to 5 kg and more as well as extreme ranges are possible.

But Adenso does more than just develop the technology for Industry 4.0 and the Internet of things, because it also deploys this technology in its own products. This means that the data from all Adenso robots is collected in a European Equipment.Cloud, meaning that customers benefit from precise and rapid data access to software updates, commissioning states, check lists, system parameters and documentation.

“Thanks to its Equipment.Cloud, Adenso has transformed, in a simple and helpful way, the Internet of things into something that can be understood and experienced,” says W. Weinrich, project manager at Bühler AG.

Image material for unrestricted use attached: Adenso.jpg

Contact:
Uwe Beier, Geschäftsführer/CEO
Tel: +49 351 79 59 79 7-0
uwe.beier@adenso.de

Gefördert wird die Adenso GmbH mittels dem Förderprogramm:
• Gewährung einer Zuwendung nach der Mittelstandsrichtlinie
• Messen, Außenwirtschaft
Projektträger: Sachische Aufbaubank – Förderbank (SAB)