



Condor Sigma W12



The Condor Sigma W12 is the ideal solution for 300mm (12 inch) wafer testing

Ideal solution for 300mm (12 inch) wafer testing

- Precision shear testing and Cold Bump Pull (CBP)
- **Big bump removal** to prepare for wafer probing
- Bump sizes down to 20µm
- Available with or without **wafer handler (EFEM)**
- XY mapping coordinates key in function
- Grading run functionality
- **Up to 4 USB Tweezers in 1 RMU**
- Easy positioning, alignment
- High resolution cameras with high and low magnifications
- Fastest throughput of wafer bump testing in the world
- 500mm X-stage and 370mm Y-stage, throat depth 400mm
- Integrated report editor and flexible data export
- Reach 100% of the 300mm wafer without repositioning the wafer on the chuck
- Blower and vacuum tool cleaning unit

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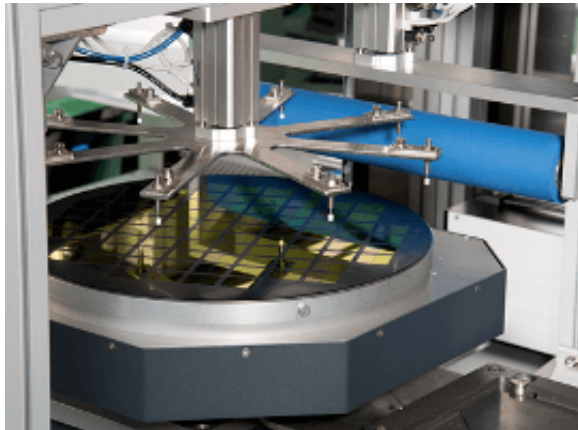
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Bond testers

- Condor *Sigma*
- Condor *Sigma Lite*
- Condor *Sigma W12*
- Condor *150HF*

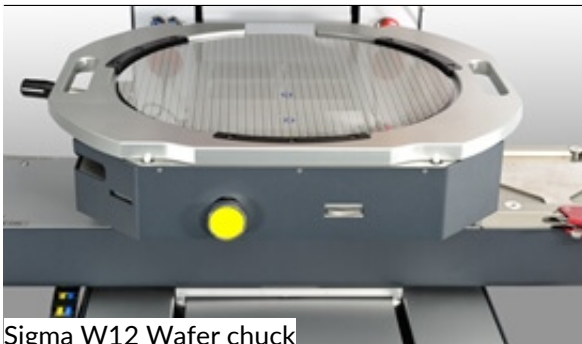
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Wafer pusher and wafer chuck cleaner besides the wafer loading arm

- Wafer chuck with safety interlocks and 360 degree rotation
- Wafer carrier mechanically locked when vacuum is turned on
- Complies with JEDEC JESD22-B117A, JEDEC JESD22-B115, JEITA EIAJ ET-7407 and IPC-9708 standards
- Also suitable for 200mm (8 inch) and other wafer sizes
- 24 bit ADC resolution, 10kHz sampling frequency
- Compatible with Revolving Measurement Unit (RMU) and single heads
- **SECS/GEM protocol**
- Wafer pusher to test warped wafers
- Unparalleled 0.075% accuracy



Sigma W12 Wafer chuck

The Condor Sigma W12 is specifically designed for precision shear testing and Cold Bump Pull (CBP) on wafer or at wafer level. The system has the largest X/Y and fastest stages available in the industry, to reach all positions on the wafer with the tool and cameras in record speed. The 30nm resolution linear encoders ensure accurate positioning.

The Condor Sigma automation features ensure rapid testing of randomly selected positions on the wafer. Fiducial mark recognition can guarantee a high repeatability. Cameras also assist the operator to perform grading. The grading run functionality enables quick grading after a sequence of tests.

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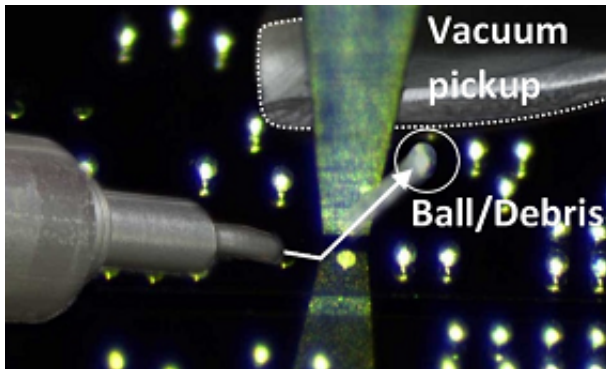
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Blower and vacuum tool cleaning unit mounted around the shear tool. The unit is not connected to the cartridge, but to the machine frame.

The Condor Sigma W12 can be equipped with up to two perpendicular cameras and a camera mounted on a trinocular microscope. We recommend using a low and a high magnification camera for best positioning and grading. A second monitor can show (live) camera images for ease of operation.

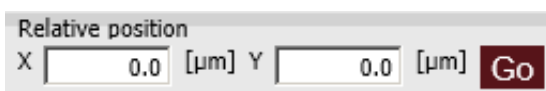
Big bumps

To prepare for wafer probing, big bumps need to be removed by shearing them off and cleaning any debris. Fully programmable vision algorithms are used to check if big bumps are successfully removed.

Revolving Measurement Unit

Compatibility with the XYZTEC **Revolving Measurement Unit (RMU)** ensures that you can switch between test types and tools with the press of a button. Unused sensors (cartridges) are protected within the machine. The RMU can hold up to 6 sensors in any combination, **including up to 4 USB Tweezers**.

XY mapping



The Condor Sigma W12 software allows the operator to quickly and accurately jump to the next test point

The XY mapping function enables the operator to quickly and accurately move from position to position on the wafer by keying in a relative move. Naturally, the Condor Sigma W12 is equipped with 30nm resolution linear encoders, ensuring 0,5µm repeatability.

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Together with the market leaders of wafer handling equipment we offer a fully integrated and automated solution

Wafer handlers (EFEM)

Установка тестирования Condor Sigma W12 может быть оснащена различными типами устройств подачи пластин (оборудование Front End процессов, модуль EFEM), что превращает тестер соединений в полностью автоматизированную систему.

Нашими клиентами являются 4 известные крупные мировые компании, которые при производстве полупроводниковых изделий требуют высокой точности, полной автоматизации процессов, низкого уровня вибрации, тестирования деформированных пластин, максимальной пропускной способности и всесторонних мер по обеспечению безопасности.

Установка тестирования Condor Sigma W12 оснащена системой автоматического определения размера пластины, центрированные подъемные штифты с ПИД-контроллерами гарантируют безопасную загрузку и выгрузку пластин.

Для получения дополнительной информации, и в случае если у Вас имеются конкретные пожелания, [свяжитесь с нами](#). В установку, показанную на видео, интегрировано

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устройство подачи пластин Rorze, но мы также имеем опыт работы с устройствами подачи пластин других производителей.

SECS/GEM

Среди других протоколов, XYZTEC предлагает передачу данных по SECS / GEM каналам непосредственно в программное обеспечение Condor Sigma или посредством EFEM. Для получения дополнительной информации, и в случае если у Вас имеются конкретные пожелания, [свяжитесь с нами](#).

Videos of the W12 in action

Condor Sigma bond tester integrated in Rorze wafer handler for fully automatic 300mm wafer testing

[Video not included in PDF: [click here to view online](#)]

Ideal solution for 300mm (12 inch) wafer testing

[Video not included in PDF: [click here to view online](#)]



Condor Sigma W12 with a calibration jig fitted

Specifications

[Click here](#) to **check the specifications** and see whether the Sigma W12 is the right system for you, or if you should select a different Condor system.

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Condor Sigma W12 sideview

Contact us

Did we catch your attention? Please [contact us](#) for more information, to request a demonstration or a quotation.

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