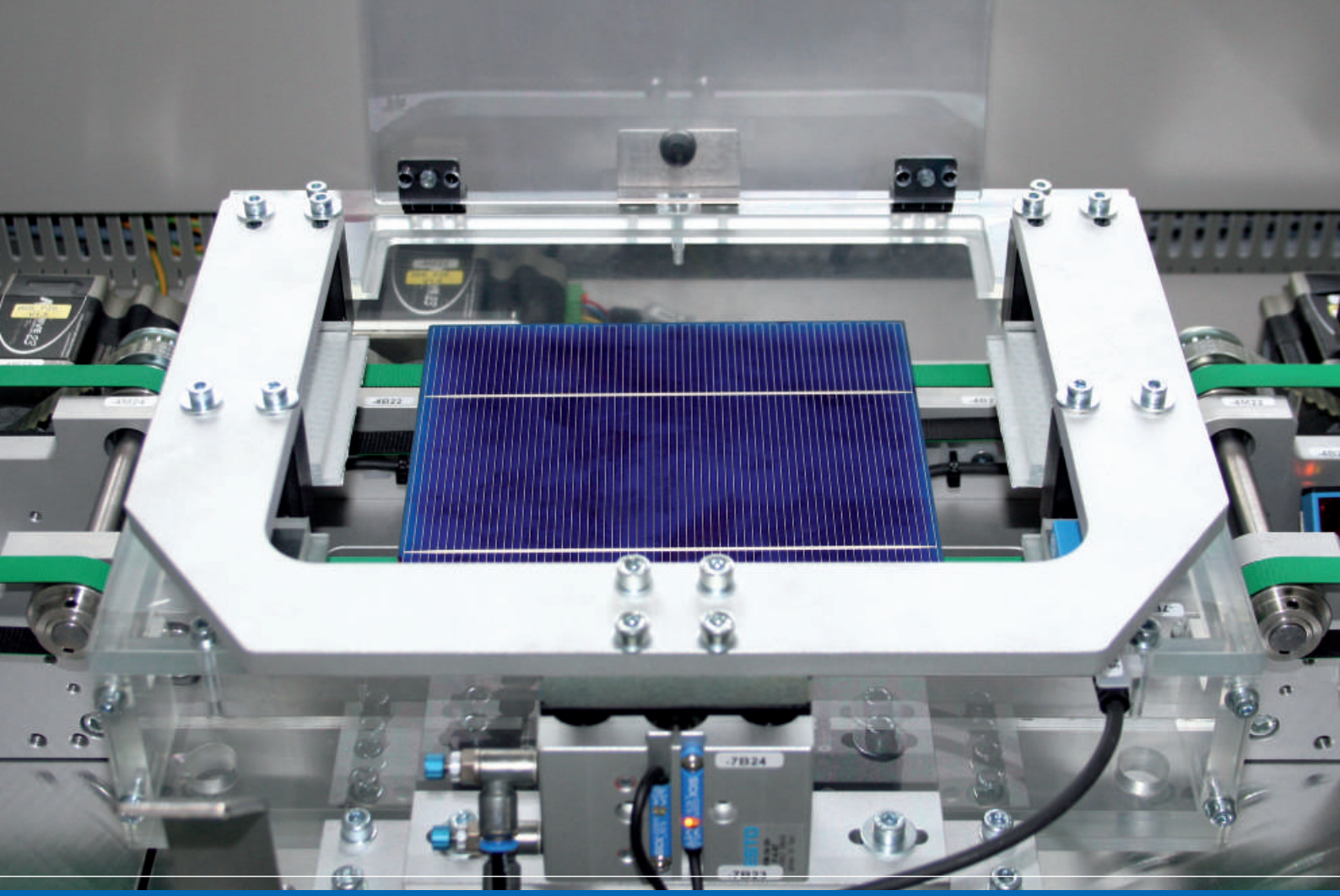

Wipotec Weigh Cells determine Weight of Solar Cells

Asys Automation Systems for Customers throughout the World

Asys Automatisierungssysteme GmbH (Asys Automation Systems Ltd.) in Dornstadt near the German city Ulm supplies its customers in the electronics and solar industries all over the world with products tailored to meet their particular needs for handling and process automation. By order of a world-famous solar group, Asys manufactures solar raw cells released for their use in solar plants. WIPOTEC Weigh Cells are used for the quality end control.

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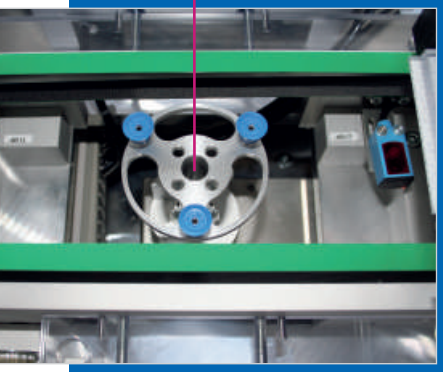
WIPOTEC
WÄGETECHNIK

Application report Solar Cells

Wipotec
Weigh Cell model "SW"



Space saving - integrated Weigh Cell

Raw cells at weight determination

Complete Solar production line at Asys

Sixteen WIPOTEC Weigh Cells of the type SW operate in Asys's "solar production lines". SW stands for "Slim Weigh Cell" with a mounting width of only 58 mm. Integrated next to each other into the lines as 3-track systems respectively multitrack systems, the SWs operate simultaneously and in parallel. Each 2.25 seconds a raw cell is finished – which amounts to 1,600 pieces per hour.
Multitrack systems allow for their integration in a confined space, where its use make the throughput quantities in the production ever larger while performing a 100% control of each single product. This means that we are not talking about a sample check where raw cells are only occasionally controlled, but about a 100% complete control of each single raw cell. All in all: 1,600 pieces per hour on a single-track system – 4,800 pieces per hour on a 3-track system. WIPOTEC Weigh Cells operate ultra-fast and precise and thus make this 100% complete control possible. Their structural design and technical inner workings are the key to success.

The integrated SW Weigh Cells have a weighing range of 20 g and a preload range of 150 g. The display resolution is 1 mg which means that the weight determination is accurate to 1 milligram – within milliseconds!
0.1 g weighs the conductive print of each raw cell that must be checked for completeness.
If the Weigh Cell discovers a shortage in weight, i.e. a raw cell has under- or overweight and therefore a quality defect, the Weigh Cell will then indicate this and the complete line stops. This procedure ensures that no further defective raw cells will be produced and forwarded to the customer.

The accuracy of the WIPOTEC Weigh Cells is no accident. They are able to compensate vibrations in the production environment. Running machines or passing forklifts cause vibrations which normally have direct impact on the measurement results and lead to a shortage in weight. Measurement errors can be prevented by using disturbance compensation. The installation of the Weigh Cell in consideration of physical factors is crucial. On the one hand, the Weigh Cell is protected by a windbreak from drafts, for even the smallest breath of wind can affect the weighing result. On the other hand, it's important to avoid electrostatic charges because the gravitational forces would otherwise be distorted by electrostatic forces. The production environment has been designed accordingly to prevent this.

The WIPOTEC Weigh Cells are constructed in a way that everything below the Weigh Cell is as heavy as possible in order to have a solid frame floor ignoring external interference sources. Everything beyond the Weigh Cell is constructed as light as possible so that the Weigh Cell can react dynamically which expresses in fast settling times. SW Weigh Cells are used in filling and packaging machines, multitrack weighing systems and checkweighers of various industries.

Jens Kuhn, project manager at Asys: „We quickly decided in favor of the manufacturer WIPOTEC because these Weigh Cells meet our requirements. The combination of precision and high speed was essential."

▶ ***Press relations***
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