

Oerlikon Esec's Die Bonder 2100 xP is he most innovative Swiss product

Oerlikon is winner of the Swiss Technology Award

Cham/Basel, November 6, 2008 - The innovation strength of the Oerlikon group is being reaffirmed. The Die Bonder 2100 xP from Oerlikon Esec – a highprecision machine for chip assembly in the semiconductor industry - was honoured last night with the prestigious Swiss Technology Award for being the most innovative Swiss product in 2008. The newly developed equipment achieves an increase in productivity of more than 80% in relation to conventional solutions. "With the Die Bonder 2100 xP, we succeeded in developing a trailblazing solution setting new standards in the chip assembly sector with regards to speed, accuracy and reliability" says Dr. Rainer Kyburz, Head of R&D Oerlikon Esec. More than 1,500 highly-qualified specialists and yearly investments in R&D of 5% of its total turnover, make Oerlikon one of the most innovative and research-intensive industrial groups in Switzerland. "The Swiss Technology Award is a remarkable acknowledgment of our constant push to extend the borders of the technically feasible and thus contributing to our customers' success. Praise and thanks go to the Oerlikon researchers and developers that live the pioneer spirit in their daily work," states Dr. Uwe Krüger, **CEO** of the Oerlikon Group.

Die Bonders play a vital role in the semiconductor assembly business. They pick the unprotected dies from a wafer and affix them to a substrate material with adhesive or solder. This process known as "pick-and-place" needs to be accomplished at highest possible speed with utmost accuracy. The requirements for efficiency and quality in the semiconductor industry are extremely demanding. The new Die Bonder 2100 xP from Oerlikon Esec manages four chip placements per second with a precision of 5 μ m – an absolutely stellar performance.

This efficiency is made possible by a revolutionary machine layout which permits a completely new movement. The conventional pick-and-place process is carried out in a three-step, angular procedure – picking the chip, raising and transporting it to the substrate, and die placement. The new die bonder succeeds in accomplishing this process by utilizing a smooth rotational movement. This transformation of the motions is considered



Page 2 "leading-edge" in robotics. Additionally, further innovations lead to minimized non-productive time. A new graphical user interface enables the simple and efficient operation of the equipment. An interdisciplinary team comprised of 40 specialists in robotics, electronics, pattern recognition, control engineering, software, engineering and product management worked together to achieve this goal. In summary, the Oerlikon Esec Die Bonder 2100 xP enables an increase in productivity of more than 80%. "This is a break-through actually considered as impossible to achieve ", says Dr. André Richoz, Head of Oerlikon Esec. "We are proud to have achieved this by using new approaches. We thank the Swiss Innovation Forum for this honour", continues Richoz.

The Swiss Technology Award is a prestigious award in Switzerland systematically supporting innovation strength. While in recent years projects in the fields of biotechnology have been amongst the winners, in 2008 projects derived from traditional Swiss competences dominated the evaluation process: for example robotics or nanotechnology used in assembly process and computer technology. A top-notch expert panel evaluated in a two-step jury procedure Oerlikon Esec as winner from a pool of over 50 applications for its innovation strength and market potential. The Die Bonder 2100 xP was formally launched in May 2008 at the industry conference SEMICON in Singapore and received high acclaim.

Legend

Picture 1: The newly developed Die Bonder 2100 xP from Oerlikon Esec achieves with its revolutionary machine layout an increase in productivity of more than 80% in relation to conventional solutions.

Picture 2: The rotational movement utilized by the new Die Bonder 2100 xP from Oerlikon Esec manages four chip placements per second with a precision of 5 μ m – a leading-edge achievement in robotics and an absolutely stellar performance in the industry.



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About Oerlikon

Oerlikon (SWX: OERL) is one of the world's most successful high-tech industrial groups specializing in machine and plant engineering. The company is a leader in the field of industrial solutions and innovative technologies for textile manufacture, thin-film solar and thin-film coating, drive, precision and vacuum systems. With roots in Switzerland and a long tradition stretching back 100 years, Oerlikon is a global player with a workforce of more than 19,500 at 170 locations in 35 different countries. The company's sales amounted to CHF 5.6 billion in 2007 and it ranks either first or second in the respective global markets.