News Release

Unique Sliding Fork handling system for glass substrates

Festo handling solutions at Intersolar North America 2011

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SAN FRANCISCO, July 12, 2011 — For the first time in North America, Festo is showing the 2011 Photovoltaic Production Technology Award finalist – the sliding fork for loading and unloading glass substrates. The sliding fork and other solutions for manufacturing in the solar industry will be on display at the Intersolar North America Festo Booth #9557 July 12-14.

The Festo sliding fork is a unique servo pneumatic or electric handling system which is optimized for vacuum applications. The sliding fork is totally leak proof, dynamic, and delivers extreme torsional rigidity. At the front end of the manufacture of thin film solar cells, .157 inch (4 mm) thick glass is fed into various process chambers and coated. This process area is under high vacuum and at a temperature of approximately 392°F (200°C). Traditionally, special clean-room robots have been used to transport the coated glass from one process chamber to the next.

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A less expensive and more compact alternative to robots is the infinitely adjustable telescopic Festo sliding fork handling system. Its telescopic capability with its triple transmission ratio allows strokes of up to 6.56 feet (2 m). The installation space required is governed by the work piece size. Festo offers a choice of drive types, with servo-pneumatic drives for high vacuum and electric drives for applications under atmospheric conditions.

Advantages of this solution:

- Installation space = size of work piece
- Up to 50 percent less cost than robotic solutions
- Step-less positioning with servo pneumatics
- Full stroke on both sides up to 6.56 feet (2m)
- Rod-less cylinder with magnetic power transmission: reduces the installation space and prevents leakage
- Self-cooling (thanks to servo pneumatics)
- Extremely high torsional rigidity in extended position: max .28 inches (7mm) deflection with 33 pound (15 kg) load

For sales information call Festo at 800-993-3786 and visit www.festo.com/us.

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Please refer to:	Festo press photo Sliding_Fork.tif
Caption to illustration:	Less expensive and more compact alternative for clean-room robots: the infinitely adjustable sliding fork telescopic handling system for transporting thin-film solar cells from one process chamber to another. (Photo: Festo)

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Journalists write to the Festo Marketing Manager marketingmgr@us.festo.com for addtional information and for access to high resolution images.