

### An Even Brighter Tomorrow

DEK has achieved its current leadership of the global SMT business by constantly moving the limits forward. The PVP1200 draws on that heritage: six-sigma repeatability at class-leading accuracy of  $\pm 12.5$  micron demonstrates capability in advance of current solar cell requirements.

Further advanced solutions to enhance productivity are poised to transfer into the solar cell arena, including dual-lane printing for extra throughput, and rapid transit conveying for further savings in core cycle time. Enhanced machine vision and reel-to-reel printing for continuous flexible substrates will also deliver improved speed and flexibility for future generations.

For today, just take a look at the PVP1200's user interface. DEK Instinctiv™ technology supports menu-driven operation, enabling accurate control of even the most complex screen printing processes – with minimal specialist skills and training. Another example of how DEK can help you produce effective solar cells in high volumes at competitive prices. In any global location.



### Act Today

To find out how DEK can help you achieve your goals in the emerging solar energy market, contact us directly or visit us online at [www.deksolar.com](http://www.deksolar.com)



## DEK Advanced Solutions for Photovoltaic Cell Production



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# DEK Advanced Solutions for Photovoltaic Cell Production

## The Sun Rising

Renewable energy has captured imaginations at the highest level. Among these, low-cost, high-efficiency solar energy is now experiencing growing demand worldwide. The time to grid parity – attaining lower cost per Watt than conventional sources – is reducing quickly. With rates of solar installations already in rapid growth, grid parity will introduce a truly global mass market.

The pathways to parity include new solar-cell technologies to improve efficiency. But manufacturing is also changing.

Existing producers are expanding, and new start-ups are entering the market; growing global capacity and also increasing competition. In this environment, continuous improvement of production processes is not only required to achieve parity, but is essential for future survival.

### Plan for Improvement

When planning your strategy, ask four key questions of your technology partner:

**Do you have the processes and equipment I need today?**

**Can you deliver on time?**

**Will you deliver the support I need and expect – in any global location?**

**Can I trust your roadmap to keep me ahead?**

At DEK, we can not only answer “yes” to each question: we have the track record to prove it.

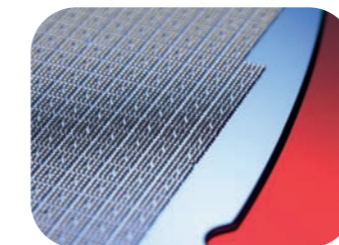


### Enduring Technological Edge

At DEK, we have delivered leading-edge screen printing solutions for advanced technology applications for over 40 years. Our history spans solar cell metallization, thick-film hybrids, high-volume surface-mount assembly, wafer-level semiconductor packaging, and many more applications requiring precision deposition of advanced materials. DEK machines in service today are performing solar cell

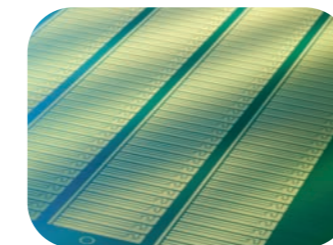
metallization with minimum line widths below 100 micron, at the industry benchmark rate of 1200 substrates per hour.

We are also the only screen printing solutions provider with our own global design and production network for precision screens and stencils covering the full range of applications.



Wafer Bumping

This allows us to deliver more than simply a convenient one-stop metallization solution. It links screen



In-house class 10,000 precision screens production capability

design closely to your equipment and processes for assured compatibility and optimal performance.

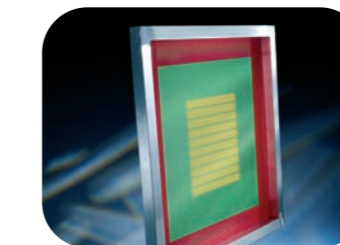
It ensures consistently high quality throughout your entire process. And it enables faster turnaround, with seamless care from initial order to setup on your production line.

### Total Metallization Solution

In 2007, we introduced a complete metallization line solution – the PV1200 line. The PV1200 line combines the class-leading DEK PVP1200 screen printer with purpose-designed loader/unloader, buffering, inspection and wafer flipping solutions and BTU's wafer drying and firing technology. The PV1200 presents a complete, turnkey solar cell metallization solution, perfectly balanced to operate at optimal throughput and incorporating advanced solutions to ensure maximum yield and minimum waste.

### Dependable Delivery and Performance

Moreover, we have the in-house machine-assembly capacity and global logistics infrastructure to ensure your new line arrives at your site, ready to be commissioned, just when you need it. Our distinguished record of service to the global high-volume electronic assembly industry proves the point. DEK customers have been producing millions of boards per year, responding quickly to increases



Precision Screen



in demand, achieving unbeatable productivity, and operating successfully in locations throughout the world.

The PVP1200 screen printer, the key component of the PV1200 line, draws on knowledge from our surface-mount and semiconductor packaging programmes. It's built using the same solid chassis and subsystems, in the same factories by the same staff – that's true platform design, delivering in a cost-effective solution and guaranteed fast turnaround for you. With no unexpected problems or installation challenges on your factory floor.

### Expect More - DEK's Global Infrastructure

DEK has technical centres worldwide, staffed by product specialists, application engineers, process experts, screen and stencil designers, and customer-focused support engineers dedicated to the success of your equipment and processes. Our centres in China, Germany, UK and USA put hundreds of experienced people within close range. Plus, our network of regional and global support teams assures you of close personal attention backed up by the full strength of DEK's worldwide resources.



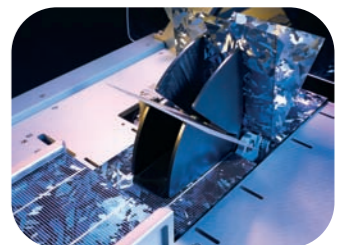
World class manufacturing operations based on Kanban principles



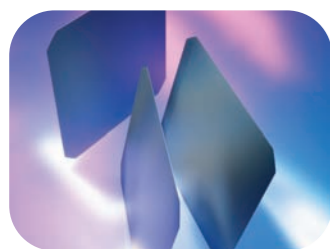
Instinctiv™ V9 advanced machine user interface



Six Sigma repeatability at class-leading accuracy of +/- 12.5 microns



Compact Buffer/Flip unit



Solar cell technologies