

Innovating digital flexo





A history of flexo innovation

For decades Esko has been developing software and hardware solutions for the packaging industry. The company invented digital flexo in 1995 and has been leading the development ever since - their products are used in about 90% of high quality flexo production. Today, Esko is synonymous with excellent quality and consistency in all flexo printing applications.



Innovating digital flexo

Over 90% of all digital flexo plates globally are imaged on a Cyrel Digital Imager (CDI) made by Esko. These CDIs enable superb results that before were only achievable in offset or gravure.

With the CDI, trade shops are able to offer superior quality, while printers receive print consistency. It's no surprise that the CDI is the most popular digital flexo plate imager in the world.

Constant improvements

Flexo technology continues to advance. As the absolute leader in flexo innovations, we continue to rethink all steps of the flexo process: can we make it better? Can we make it faster? Can we make it cost effective?

Your whole flexo production cycle benefits even more from a wide array of state of the art advancements. From advanced screening methods, to plate room automation, to best imagers on the market.

A flexo solution to suit your needs

From narrow web label printing, to flexible packaging and wide format corrugated printing, from one color printed corrugated boxes to highly sophisticated multi-color packaging and even security printing.

For ablative film, silk screens, for letterpress and flexo plates and sleeves: whatever your type of business, Esko has the most advanced Digital Flexo solution to fulfill your needs.



An imager that matches your needs

You can choose and configure a CDI to match your current production needs, and expand capabilities as your business grows. The CDI can accommodate all plate and sleeve sizes. And, you have the freedom to choose any brand of digital plate and processing method.



Match your CDI to your production needs. From left to right: CDI Spark 2530, CDI Spark 4835 and the CDI Spark 4260.



Flexible resolutions and speed

All CDIs are equipped with Fiber lasers and dedicated optics that guarantee superior and reliable imaging.

All CDIs feature fully variable imaging resolutions between 2000 and 2540 ppi, respectively 2540 to 4000ppi via the HighRes Optics. They deliver a significantly extended tonal range with smooth vignettes, exceptional highlights and shadows. For special security applications, the resolution can be increased to 8000 ppi and even beyond.

Imaging speed depends on the modular laser optics you have selected for your own CDI. With the Optics 80 multi-beam option, the CDI can reach a record imaging speed of up to 8.0 m²/hr.

Widest choice of flexo plates and sleeves

With a CDI, you can image flexo plates and sleeves for virtually any kind of application. With the CDI family's broad selection of sizes, you can choose from the widest variety of plate sizes. Any type and brand of digital flexo, digital letterpress plate or ablative film can be used on a CDI.



Plate handling

The off-line plate-loading table provides safe, damage-free and distortion free plates throughout the entire plate making process.

Plate handling becomes a user-friendly process: from loading to unloading the imager, UV-exposure or washer. The EasyLoad table includes a helpful plate-cutting tool.

Stay ahead

HD Flexo and Full HD Flexo: the new standards for flexo quality

The quality of offset and gravure printing used to be unattainable for flexo. Now, with HD Flexo and Full HD Flexo, the gap is closed. Bringing consistency and repeatability, smooth transitions, perfect ink laydown and vibrant colors with increased print quality, HD Flexo and Full HD Flexo raise the industry standard in flexo printing.

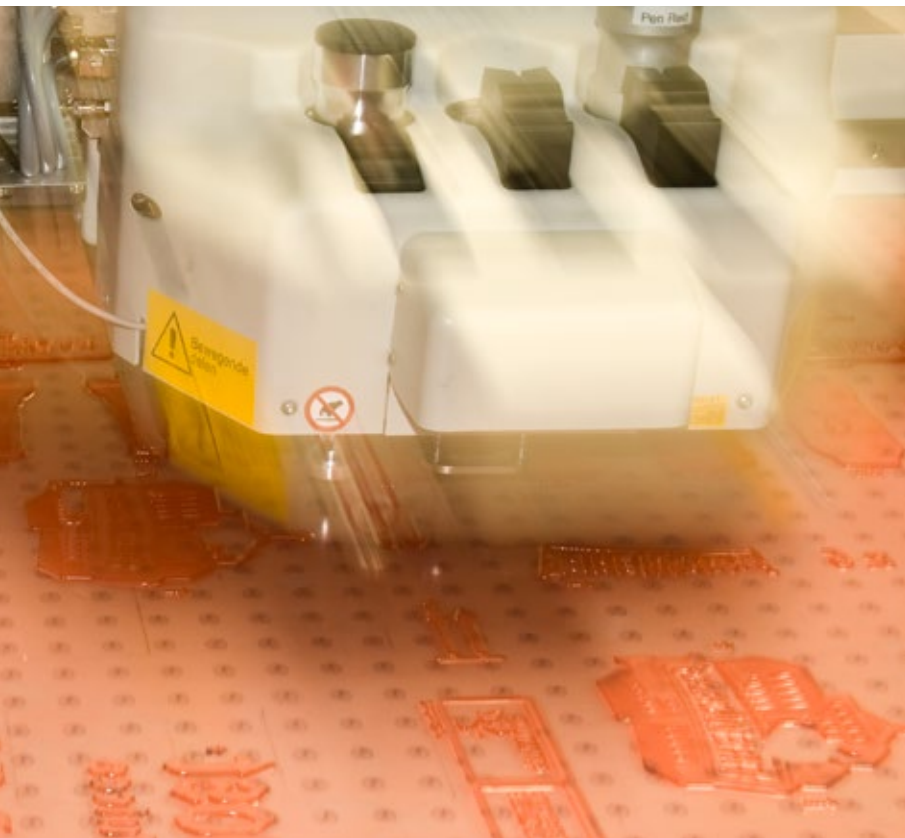
For more info, see page 12.



Automate your flexo production

The Digital Flexo Suite offers significant cost and time savings through the automation of the flexo print plate production. The Digital Flexo Suite is a collection of Esko's plate making software, designed especially for the needs of the packaging industry.

For more info, see page 10.



Flexo benefits

Faster ready to print

By making almost every step in the flexo workflow automatic, and by increasing the overall quality, flexo becomes a very attractive print process.

It cannot be beaten in terms of cost efficiency and speed. Reduce the amount of repro work with HD Flexo. Speed up your plate production with the automation tools of the Digital Flexo Suite.



Repeatable quality

The superior plate quality from a CDI with HD Flexo is exactly what a printer needs to achieve outstanding results: fine highlights, excellent details and superb coverage in the shadows. The CDI delivers it the first time, and every time. HD Flexo plates have been proven to print more consistently than conventional in long print runs. You're able to deliver repeatable quality, job after job.



Environmentally sustainable

The CDI images straight on the plate, and eliminates the need for film and chemical processing. This way you can help your business comply much easier — and much less expensively — with local environmental regulations. What's more: Flexo has 50% of gravure's CO₂ emissions. With spot color to process conversion, less ink and less substrate wastage that further reduces print's environmental footprint.



Sleeves: a seamless flexo process

Using sleeves increases the printing press speed and delivers perfect register. There are no deformed or distorted sleeves after processing, resulting in the best geometric accuracy.

Digital flexo sleeves can compete with gravure to print snack food wrappers, pouches, and frozen food bags that typically carry continuous images and only require a single cut prior to packing and sealing.



Seamless sleeves with CDI Advance Cantilever

CDI seamless sleeves can be imaged on the CDI Advance Cantilever 1750 and the CDI Advance Cantilever 1450. For mid-web sleeve formats, Esko offers a cantilever system in combination with an automated tailstock. This system makes it possible for one person to easily change a sleeve without additional tools.

Affordable sleeve quality

Flexo sleeves offer affordable sleeve quality on a CDI. Made-to-order digital blanks can be purchased, ready to image, with a variety of choices for different product segments. Every repeat length is available.

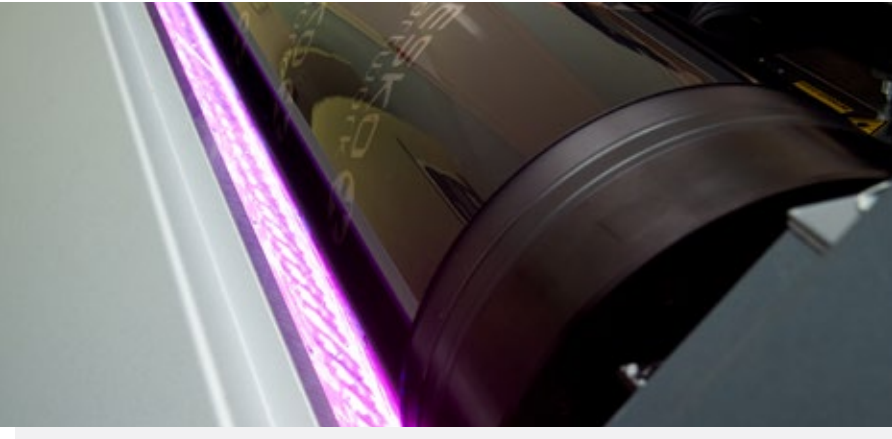
The CDI Advance Cantilever can easily be converted from sleeve imaging to plate imaging by using the drum sleeve. The drum sleeve option always comes with the SEMI functionality: fully automated plate loading and operator supported unloading.

Optionally available for the CDI Advance Cantilever 1750 is a drum sleeve for plates up to 50" x 80" / 1270 x 2032 mm, for the CDI Advance Cantilever 1450 a drum sleeve for plates up to 42" x 60" / 1067 x 1524 mm.



The CDI Advance Cantilever

Inline UV for maximum precision



A major leap forward in flexo technology is digital plates with UV main exposure. Digital plates get UV main exposure in the same device in which they are imaged. This means that no subsequent exposure is required on an offline light frame.

Combining these two processes in one device brings cost down, reduces errors and boosts quality. The Inline UV Main Exposure option increases the quality and reliability of digital flexo plates by ensuring that each square centimeter of the plate receives the same amount of UV light needed to fully polymerize the plate. It reduces the operating costs and environmental load.



Letterpress

The letterpress option comes with a magnetic drum or as a magnetic vacuum drum.

It allows the CDI to image steel back and foil based letterpress plates as well as flexo plates. For perfect registration the drums can be equipped with customized register pin systems.

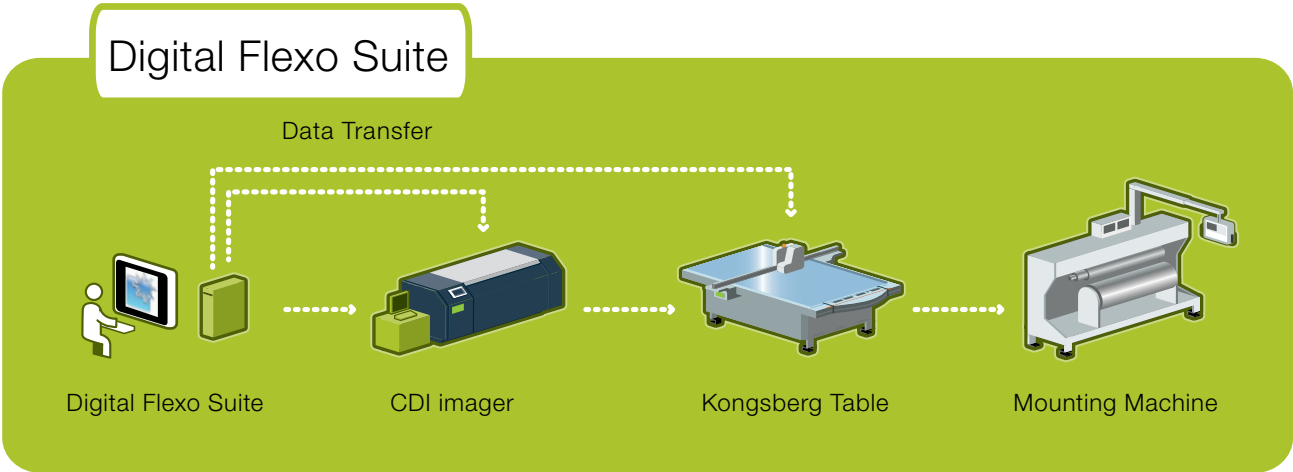
Security printing

When security is an issue, SecuFlex optics is the solution. SecuFlex answers to the highest quality demands of the flexo and letterpress market.

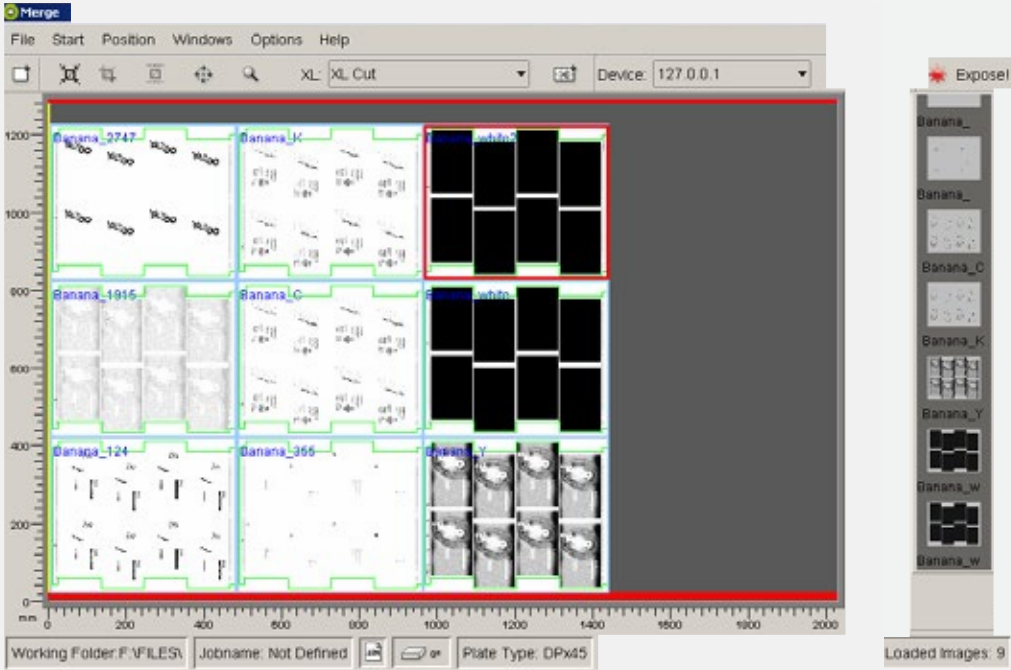


SecuFlex delivers the highest quality in security printing.

Automate your flexo plate production



The Digital Flexo Suite offers significant cost savings through the automation of flexo plate production. It is a collection of Esko's plate making software, designed especially for the needs of the flexo plate production and mounting. There is a Digital Flexo Suite for labels, flexible packaging and corrugated workflows. Digital Flexo Suite enables operators to prepare multiple jobs and simultaneously drive several CDI's. Each imaged and cut plate receives a detailed production report for invoicing purposes. Plates are automatically cut to the size of the bitmap file. Hot folder functionality automates basic functions of the plate preparation software. And, a high-end viewer permits detailed inspection of the bitmap files prior to imaging.



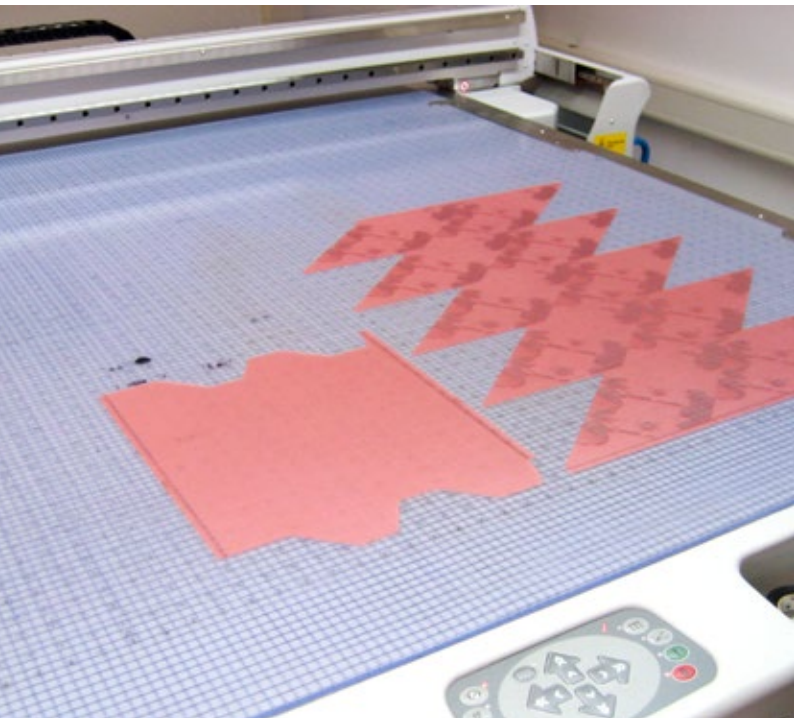
Intelligent tools make cost-efficient plate layouts.

Benefits

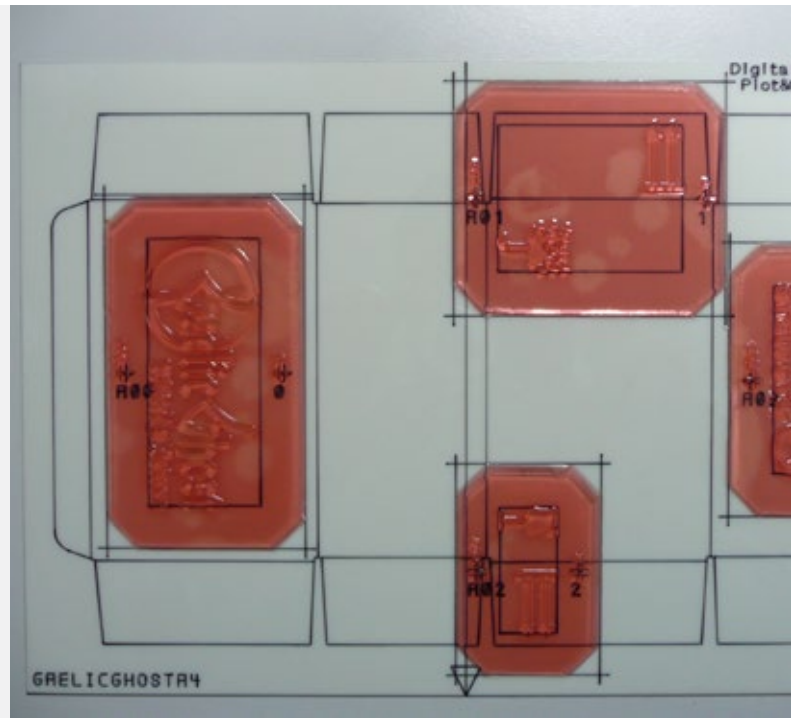
- Customers report an average plate waste reduction of 15% from the Digital Flexo Suite.
- Automation of complex manual labor leads to less human mistakes.
- Each imaged and cut plate automatically receives a detailed plate report. This report can be used for quality control and invoicing.
- Automated carrier sheet preparation.
- Reducing plate waste has a direct positive impact on the CO₂ balance.



Kongsberg digital cutting tables cut the flexo plates quickly and accurately.



The cut patches are reassembled on carrier sheets.



HD Flexo and Full HD Flexo: the new standards for flexo quality



HD Flexo has set the new flexo printing standard for fine highlights, transition to zero, sharp text and brilliant image details.

Full HD Flexo is adding perfect ink laydown with the right solid density, vibrant brand colors, supreme platemaking consistency and the only fully digitally controlled platemaking workflow available in industry.

Now flexo can compete with gravure and offset in flexible packaging, labels and corrugated printing applications.

HD Flexo and Full HD Flexo benefits

- Smoother, sharper images with expanded tonal range
- Bright vibrant solids and a wider color gamut
- Supreme platemaking consistency
- Industry standard quality supported by major plate vendors

A true alternative for offset and gravure

Matching the quality of offset and gravure printing has always been the goal for flexo. Now, with HD Flexo, that gap is closed. Bringing consistency, vibrant colors and increased print quality, HD Flexo has become the industry standard in flexo printing.

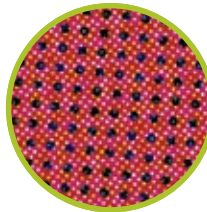
Flexo printing can now compete with offset for quality labels and with gravure for flexible packaging. In addition, digital plate exposure ensures greater consistency in plate production and in printing.

Excellent print quality

High resolution imaging on the CDI creates a textured surface on the plate, improving ink lay-down and increasing ink density on the final print.

The result is improved image richness and contrast. This is especially helpful for PANTONE® colors, and for white underprints.

Intense colors



Smooth transitions to zero



Sharp details: high contrast



Esko Finance - tailored to your needs

Investing in your future is not something you go about lightly. We offer all-in financial solutions for your hardware and software investments. Esko Finance offers a wide range of flexible financing solutions. They free up your working capital and investment budget. This means that you can allocate cash for other investments.

Solution Services

Esko Solution Services help you realize significant value opportunities in flexo production.

Our team of solution architects has the experience to design and implement Esko solutions adapted to your specific requirements.



Support

Our goal is to ensure you have immediate access to the highest level of competence for your hardware or software support. Once a system is fully operational, it is essential that you can rely on a fast and continuous support to maximize your uptime.

Training

Good training offers many benefits to your company. It enhances the skills of your employees and increases their productivity - thus increasing return on investment. The Esko Academy offers a wide and diverse range of training sessions to achieve all your goals.



The CDI Family: a model for every need

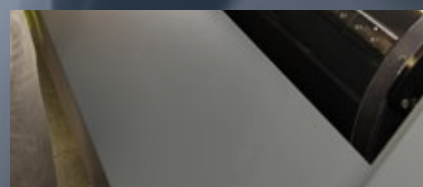
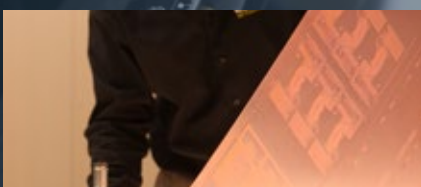
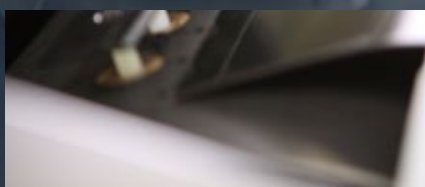
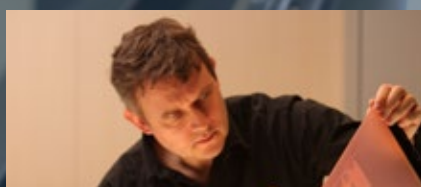
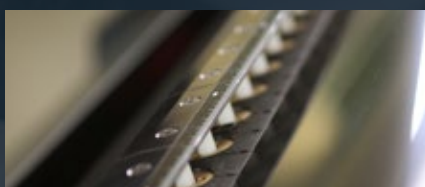
The CDI family offers the widest range of digital flexo imagers — from small to extremely large, and for plates or sleeves — with upgrades to grow with your production needs.

Name	Plate size/Sleeve size	Optics/Productivity
CDI Spark 1712 / A3 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> 420 x 300 mm </div>	<div style="background-color: #c6e0b4; padding: 5px;">7.5 0.75 m²/h</div>
CDI Spark 2120 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> 533 x 508 mm </div>	<div style="background-color: #c6e0b4; padding: 5px;">7.5 0.75 m²/h</div> <div style="background-color: #92d050; padding: 5px;">10 1.0 m²/h</div>
CDI Spark 2420 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> 609 x 508 mm </div>	<div style="background-color: #c6e0b4; padding: 5px;">7.5 0.75 m²/h</div> <div style="background-color: #92d050; padding: 5px;">10 1.0 m²/h</div> <div style="background-color: #6aa84f; padding: 5px;">15 1.5 m²/h</div>
CDI Spark 2530 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> 635 x 762 mm </div>	<div style="background-color: #c6e0b4; padding: 5px;">7.5 0.75 m²/h</div> <div style="background-color: #92d050; padding: 5px;">10 1.0 m²/h</div> <div style="background-color: #6aa84f; padding: 5px;">15 1.5 m²/h</div> <div style="background-color: #38761d; padding: 5px;">25 2.5 m²/h</div>
CDI Spark 4835 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> 1200 x 900 mm </div>	<div style="background-color: #92d050; padding: 5px;">15 1.5 m²/h</div> <div style="background-color: #6aa84f; padding: 5px;">25 2.5 m²/h</div> <div style="background-color: #38761d; padding: 5px;">40 4.0 m²/h</div> <div style="background-color: #1a5222; padding: 5px;">80 8.0 m²/h</div>
CDI Spark 4260 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> 1067 x 1524 mm </div>	<div style="background-color: #92d050; padding: 5px;">15 1.5 m²/h</div> <div style="background-color: #6aa84f; padding: 5px;">25 2.5 m²/h</div> <div style="background-color: #38761d; padding: 5px;">40 4.0 m²/h</div> <div style="background-color: #1a5222; padding: 5px;">80 8.0 m²/h</div>

Name	Plate size/Sleeve size	Optics/Productivity
CDI Spark 4835 Auto 	 <p>1200 x 900 mm</p>	<ul style="list-style-type: none"> 15 1.5 m²/h 25 2.5 m²/h 40 4.0 m²/h 80 8.0 m²/h
CDI Spark 4260 Auto 	 <p>1067 x 1524 mm</p>	<ul style="list-style-type: none"> 15 1.5 m²/h 25 2.5 m²/h 40 4.0 m²/h 80 8.0 m²/h
CDI Spark 5080 	 <p>1270 x 2032 mm</p>	<ul style="list-style-type: none"> 15 1.5 m²/h 25 2.5 m²/h 40 4.0 m²/h 80 8.0 m²/h
CDI Spark 5080 Auto 	 <p>1270 x 2032 mm</p>	<ul style="list-style-type: none"> 15 1.5 m²/h 25 2.5 m²/h 40 4.0 m²/h 80 8.0 m²/h
CDI Advance Cantilever 1450 	 <p>1067 x 1524 mm</p>  <p>max. length 57.1" - 1450 mm max. repeat 50" - 1270 mm</p>	<ul style="list-style-type: none"> 15 1.5 m²/h 25 2.5 m²/h 40 4.0 m²/h 80 8.0 m²/h
CDI Advance Cantilever 1750 	 <p>1270 x 2032 mm</p>  <p>max. length 69" - 2000 mm max. repeat 50" - 1270 mm</p>	<ul style="list-style-type: none"> 15 1.5 m²/h 25 2.5 m²/h 40 4.0 m²/h 80 8.0 m²/h

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