

Cyrel[®] Digital Imager Digital Flexo

EskoArtwork white paper

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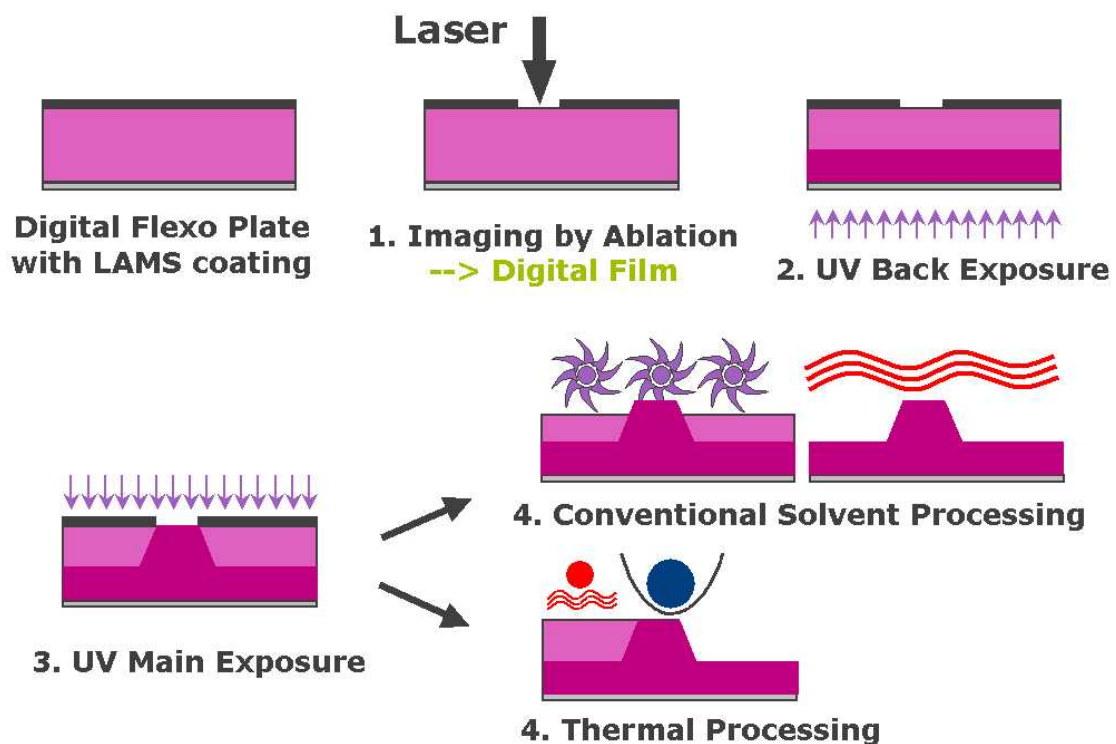
1 Introduction

The EskoArtwork Cyrel® Digital Imager (CDI) is the first and the most popular laser imager for Flexo plate engraving. Introduced in May 1995, it represented a great leap forward in digital flexography. CDI plates offer an unmatched **quality and printing stability** that has so far only been achievable in offset and gravure. This allows the EskoArtwork CDI customers to expand their business by taking on jobs that were done in offset or gravure. Easier printing and consistent results with CDI plates and sleeves make the printers happy, too. The CDI is based on over 40 years of experience of our Digital Flexo product group, located in Itzehoe (Germany), in Flexo plate-making applications.

Since the introduction of the worldwide first YAG-Laser engraver for continuous rubber rollers already back in 1975, we continued to drive Flexo plate-making technology further onwards. Some milestones are e.g. CO₂-Laser systems for rubber-sleeve direct engraving, as well as the worldwide first Laser engraving system for Anilox rollers, developed in 1980 together with our technology partner Praxair Inc.

To finally close the quality gap between Flexo and Offset/Gravure, the digital Flexo technology was developed together with our technology partner DuPont Cyrel®, starting in 1990, and finally introduced to the Flexo world at Drupa 1995.

A digital Flexo plate is build from a conventional Flexo plate, but coated with a Laser-ablative mask (LAMS). The image information is transferred to the LAMS coating by opening the image pixels with a high-power laser beam, resulting in a “digital film” on top of the Flexo plate. The Flexo plate is then processed in the same way like a conventional plate, as described in the figure below:



Besides eliminating the film imaging and development process as well as the need for clean-room conditions for UV main exposure, the main advantage of the digital Flexo workflow is the tremendous quality improvement

compared to conventional Flexo plates, namely much smaller highlight dots and much more open reverses, significantly less dot-gain and improved repeatability due to the overall digital workflow.

Compared to thermal offset plates, The LAMS coating needs about 30 times higher laser power and energy density for proper image transfer, thus requiring special imaging technologies based on solid-state Lasers (YAG-, Fiber-Laser).

The unique FTA and GATF award winning CDI technology is especially designed to image digital Flexo plates with highest possible accuracy, reliability, flexibility and productivity.

All CDI models are designed to ensure that any decision made today regarding the choice of equipment leaves options open for later upgrades, to secure the investment regardless of future developments.

All CDI models support the use of all available digital Flexo plates, regardless of vendor and plate thickness. Furthermore, ablative film and digital versions of polyester base Letterpress plates can be imaged on all CDI models as well.

To reduce plate wastage, it is also possible to image plate parts that are smaller (in one or both directions) than the maximum plate format.

The CDI is fully integrated into the sophisticated EskoArtwork Flexo workflow, but is also open to all other workflow solutions by directly accepting 1-bit (ripped) TIFF files. Some models are equipped with an integrated Adobe-certified RIP, thus accepting PostScript Level 3 / PDF 1.4 input format as well.

The *GRAPHOLAS*[®] operating software, delivered together with every CDI, is a highly sophisticated control and layout software incorporating all Flexo-relevant features to minimize plate waste, to standardize production, to support output to multiple CDIs and to reduce plate-making errors as much as possible.

The CDI is equipped with high-quality functions and features that ensure the highest degree in productivity, flexibility and reliability.

This fully modular system is ideal to adapt to customized needs and to preserve the investment by a full upgrade path towards future needs.

2 The CDI Family



The **CDI Spark 2120** specifically addresses the tag and label market, folding carton and small volume Flexo plate producers in general. Plate sizes range up to 21" x 20" / 533 mm x 508 mm. The CDI Spark 2120 comes with EasyClamp for enhanced plate loading.

OPTIONS:

- HighRes optics 10 (2540-4000PPI)
- Magnetic Drum Letterpress Drum



The **CDI Spark 2530** specifically addresses the tag and label market, folding carton and small volume Flexo plate producers in general. Plate sizes range up to 25" x 30" / 635 mm x 762 mm.

OPTIONS:

- HighRes optics 15/25 (2540-4000PPI)
- SecuFlex optics (4000 - 8000PPI)
- Magnetic Drum (Steel back Letterpress plates)
- Magnetic-Vacuum drum (Steel back and Foil based plates)



The **CDI Spark 4835** specifically addresses the small and medium volume label and folding carton Flexo plate makers and converters. Plate sizes range up to 47.2" x 35.4" / 1200 mm x 900 mm.

OPTIONS:

- HighRes optics 15/25/40 (2540-4000PPI)
- SecuFlex optics (4000 - 8000PPI)
- Magnetic Drum (Steel back Letterpress plates)
- Magnetic-Vacuum drum (Steel back and Foil based plates)
- EasyLoad 4230/4835



The **CDI Spark 4260** specifically addresses the wide-web Flexo market, namely flexible packaging and folding carton, with special support also for corrugated. Plate sizes range up to 42" x 60" /1067 mm x 1524 mm.

OPTIONS:

- HighRes optics 15/25/40 (2540-4000PPI)
- EasyLoad 4260



The **CDI Spark 5080** is addressing the wide-web Flexo market, namely flexible packaging and folding carton, with special support also for corrugated.. Plate sizes range up to 50" x 80" (1270 mm x 2032 mm).

OPTIONS:

- HighRes optics 15/25/40 (2540-4000PPI)
- EasyLoad 5080



The **CDI Compact Cantilever** is dedicated to the medium-web Flexo market in general and images digital photopolymere sleeves. Due to the automated cantilever, sleeves can be quickly exchanged on a job-to-job base by one person.

OPTIONS:

- Drum size 42"x30" (1067x762 mm)
- Drum size 48"x35" (1200x900 mm)
- EasyLoad 4230/4835



The **CDI Advance Cantilever** is addressing the wide-web Flexo market, namely flexible packaging and folding carton market. The machine and images digital photopolymere sleeves. Due to the automated cantilever, sleeves can be quickly exchanged on a job-to-job base by one person. two different drum sizes, suitable for maximum plate format 42"x60" (1067x1524 mm), as well as 50"x80" (1270x2032 mm).

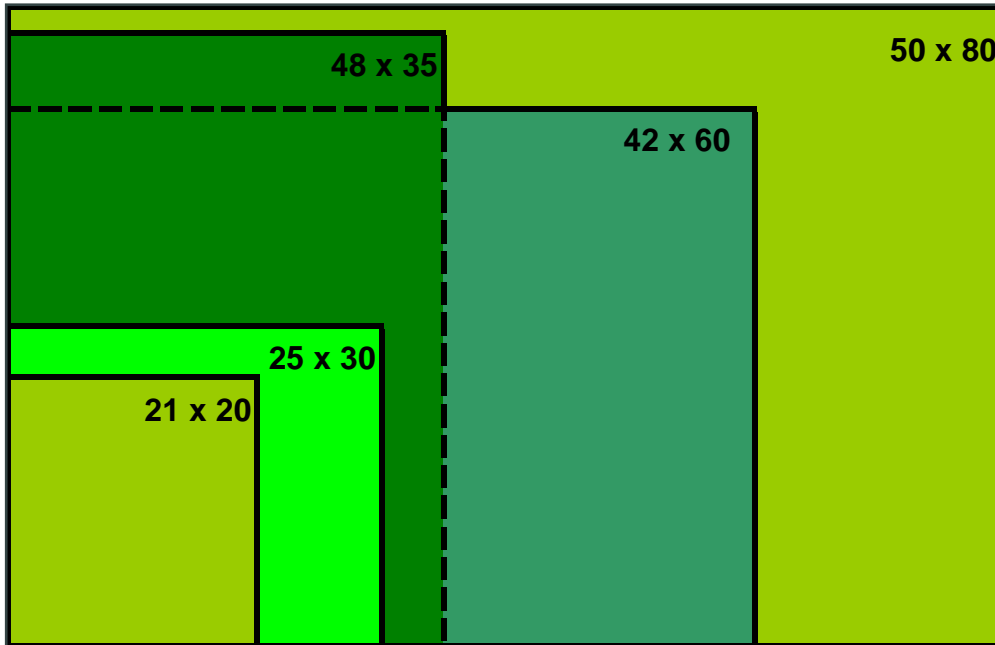
OPTIONS:

- Drumsleeve 5080 (1270x2032 mm)
- EasyLoad 5080

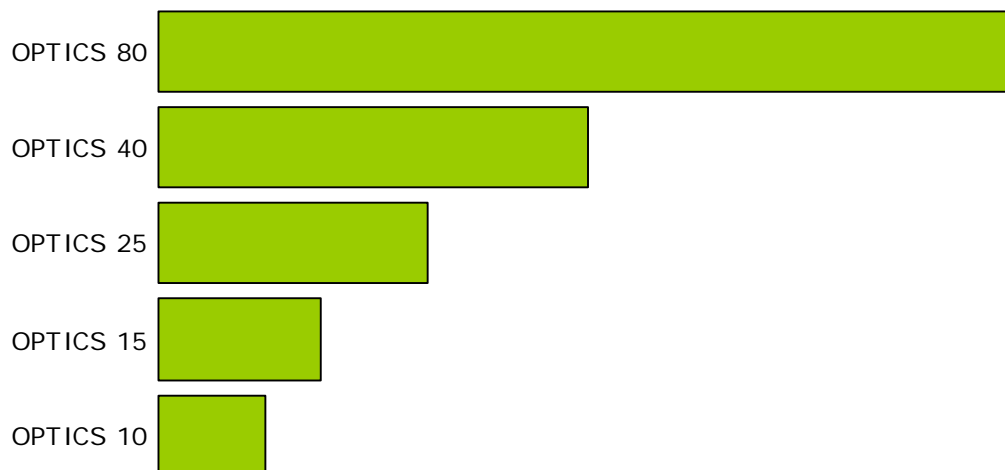
The CDI family is the clear and tangible result of customer-driven development, the natural result of our partnership with our customers. Customized solutions can be delivered.

2.1 Formats

The CDI family offers the most complete imaging format range available for CtP Flexo:



2.2 Productivities



Upgrades are available to adapt the CDI productivity to growing plate volume, thus saves the once-made investment for a long time.

2.3 Options

The **Cantilever** is standard on the CDI Advance Cantilever and on the CDI Compact Cantilever. It is optional on the CDI Classic.

The **Sleeve option** is only available for the CDI Advance, CDI Compact and the CDI Classic. It requires additional mandrels for sleeve preparation outside the machine. It is the most cost effective to turn your CDI into a sleeve capable CTP.

The **Letterpress option** comes as a Magnetic Drum or as a Magnetic-Vacuum Drum. It allows the CDI to make steel back / foil based Letterpress plates as well as flexo plates. Check the CDI details to see which drum is available for each system.

The **HighRes option** allows the CDI to run a variable resolution (2540ppi to 4000ppi) to obtain the highest quality on a flexo or letterpress plate. It is especially designed to address the growing quality demand in the label market.

The **SecuFlex option** answers the highest quality demands of the flexo market. Its main target is the security printing business. A SecuFlex optics can be fitted (also as upgrade) on any CDI.

The **EasyLoad** is a plate loading table which safely maintains, damage-free and distortion-free plate handling through the entire plate making process

Check the CDI details to see which option is available for each system. For details of the options, see paragraph 4.11.

2.4 Resolutions

CDI optics are featuring fully variable imaging resolutions between 2000 and 2540 ppi. Higher resolutions are optionally available: see HighRes (2540 → 4000ppi) and SecuFlex (4000 / 8000ppi) sections.

The CDI imaging technology is designed in such a way that the imaging resolution is fully determined only by electronics control, i.e. there are no "moving parts" involved at all. So imaging resolution can be changed from job to job, within fractions of a second.

The imaging resolution for the actual job is automatically extracted from the internal resolution of the next ripped file in the job queue, thus there is no operator interference necessary, resulting in a very simple and error-proof workflow, even in multiple sides and/or multiple CDIs workflow.

2.5 CDI Advantages @ a glance

Economical Advantages	Technical Advantages	Quality Advantages
EskoArtwork offers workflow solutions : wastage reduction with Digital Flexo Suite!	1 Station links to the CDI as well as to the Kongsberg Table and/or to a Mounter.	Less Errors, fit-to-press plates
EskoArtwork offers the most Flexible Product Portfolio : customized systems, full upgrade path, biggest plate size and optics range.	Plate : CDI Spark 2120, 2530, 4835, 4260, 5080 Sleeve : CDI Compact Cantilever, CDI Advance Cantilever Optics : 1.0m ² /h up to 8.0m ² /h	Dedicated systems for your application: Letterpress (Mylar & Metal back), dry Offset, Film, Varnishing Plates and Flexo plates
The fastest commercially available CTP Flexo on the market: Up to 8.0m ² /h Flexo plates	The EasyClamp assures a fast and secure loading/unloading of the plate: More plates per hour.	CDI technology has continuously improved since 1995
Partial plates imaging possible on all CDI's.	NO covering of the drum needed NO balancing system needed	All* CDI have a granite bed on which drum and optics are mounted. *except the CDI SPARK 2120
Fast changeover between plates and sleeves on job-to-job base	The Advance Cantilever allows the fastest changeover from plates to sleeves.	CDI's are workhorses! 90% of all flexo plates are made on CDI's
State of the art control and layout software to minimize plate wastage, standardize production (templates) and to reduce job-making errors.	Straightforward features incorporating all necessary steps to produce flexo plates.	Easy to use and reliable software
All CDI optics are compatible to each other (former CDIs can be upgraded for compatibility) for identical printing results .	Laser and sealed optics (no dust!) are especially developed for Flexo imaging .	Perfect Beam quality with the Fiber Laser: all beams have the same ablation behaviour (holographic copies of the master beam).
Concept supports all current and future Flexo plate materials / sensitivities / needs	Self regulated laser power	High Focal depth (almost 0.5mm): Plates and sleeves can be imaged w/o need of an auto-focus system
A single board drives the CDI. This leads to fewer failures and thus a higher uptime of the system.	Fully variable imaging resolution The variable resolution and seamless screens guarantee seamless/endless printing sleeves	Any* resolution can be used. *between 2000-2540ppi / 2540-4000ppi
Most ideal solution for multiple sites (decentralized production linked to a centralized Repro).	FlexRip / Nexus Rip at one site, output at local or remote CDI.	Image can be matched in length as well as in quality (between several CDI's).

2.6 Why does the CDI save your investment?

2.6.1 Full Upgrade Path:

- All CDI models are designed to ensure that any decision made today regarding the choice of equipment leaves options open for later upgrades, to secure the investment regardless of future developments.
- Modular design
 - Easy to service
 - Full upgrade policy
- Optics (productivity, new plate material types)
- Workflow improvements (PLATEPREP, ESKOARTWORK DIGITAL FLEXO SOLUTION FOR LABELS, FLEXIBLE PACKAGING AND CORRUGATED, JDF etc.)

2.6.2 Open to new technologies

- Modular optics design supports all future plate material concepts.
- Open Standard formats (Tiff & Len)
- **Operator can adapt optics set-up to new plate types**
It is entirely up to you which brand(s) or type(s) of plate you image, for digital Flexo, digital letterpress or even thermal ablative film
- Full control to adapt to new coating sensitivities / other plate vendors

2.6.3 I³ Improvement, Innovation, Integration

- Value-added consulting services: FIQ
- Quick-Win program, Custom Gamuth MCPP program, SpotOn Tuning, QuickScan program, FIQ - Complete knowledge path from design station up to press, CMM-benchmarking, B2Bi program, JDF program

2.6.4 Reliable Productivity

- More than 40 years experience in Flexo assures
Optimal imaging solutions
Optimal workflow solutions
Optimal support from design stage up to press
- The CDI gives you top productivity. With constant design improvements to continuously optimize throughput, the CDIs imaging speed has nearly doubled every 18 months. The CDI gives you highest throughput combined with highest reliability and reduces plate wastage to a minimum. Additionally the CDI comes with the best plate preparation software, so you optimize your plate utilization.
- Printers and Converters will benefit from printing top quality at lower cost with faster press setup and smooth registration.

2.6.5 Repeatable Quality

- Your success depends on the accurate quality of the plates you deliver. With the CDI that quality is right where you and your customers expect it: first time, every time.
- Reduced dot gain through digital control
- No film, no dust
- Better shadow detail
- Wider colour gamut through open reverses
- Finer highlights

2.6.6 Remake = Original

Due to industry consolidation, international facility management schemes combined with just-in-time production pressure Flexo printers are often faced with the need to remake plates.

With an EskoArtwork CDI you can image exact copies of any plate out of a set originally made on the CDI. You will be sure that your remake will match the original perfectly thanks to the dedicated laser-optics design, tight engineering specifications and standardized quality control targets.

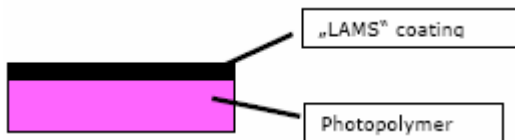
2.6.7 Large installed base

EskoArtwork has clearly sustained the 70% market share the CDI has enjoyed since its introduction in 1995. The CDI family of plate setters, the world's first digital imagers for Flexo plates, is installed and operating in more than 850 plants worldwide. About 90% of all digital Flexo plates globally are imaged on an EskoArtwork CDI Flexo plate setter.

The demand for Flexo-related packaging is growing due to a significant increase in quality, reliability and consistency – thanks to CDI technology.

3 The CDI in detail

3.1 Features of digital flexo plates:



- High power density required for LAMS ablation
- 10 x higher thickness tolerances than Offset plates



- Consequently, CTP Flexo plates require dedicated Laser source and Optics solutions!

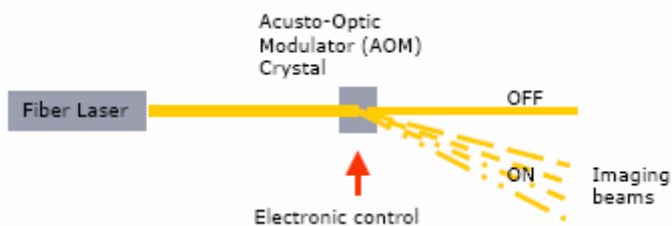
Mandatory features of digital Flexo imaging optics:

- High power density to maintain good ablation
- High quality of light source to allow sufficient focal depth
- Absolute identical beams on plate to avoid bending and moiré patterning

3.2 CDI Imaging Concept

3.2.1 Optical Basics

Highest Quality Single Fiber Laser + ADM beam splitter

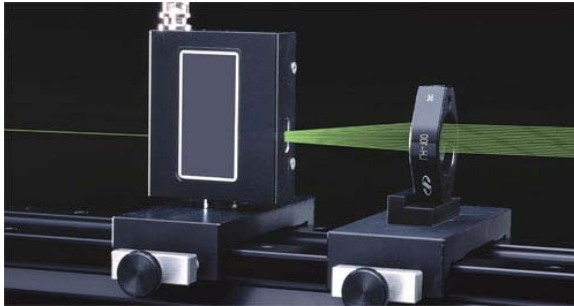


- Continuous laser beam emission
- Reliable and flexible beam splitting
- Identical imaging beams
→ perfectly adjustable optics (no moirés!)
- Variable imaging resolution (plate to plate)
- Simple and proven technology

3.2.2 Advantages of the CDI imaging optics

All CDI models are using a single fiber laser source plus an AOM beam splitting device to ensure optimal imaging quality, repeatability and reliability.

The electronic signal that drives the AOM beam splitting crystal is shaped in such a way that all generated beams are carrying individual imaging information to the digital Flexo plates, thus the CDI optics is a true multiple beam imaging device.



1. Absolutely identical imaging beams

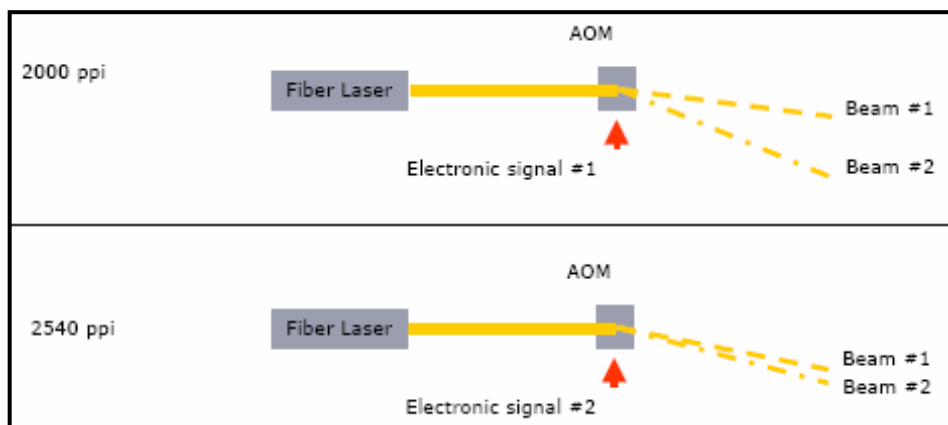
All imaging beams are holographic copies of the master Laser beam, thus having absolutely identical imaging characteristics.

This is the only way to guarantee moiré-free and banding-free imaging for all possible combinations of line-counts and Flexo angles.

2. Fully variable imaging resolution

All CDI optics are featuring fully variable imaging resolution between 2000 and 2540 ppi for multiple beam imaging on a plate to plate base (On option: HighRes 2540 – 4000PPI variable ; SecuFlex 4000PPI or 8000PPI fix).

The CDI imaging technology is designed in such a way that the imaging resolution is fully determined by electronics control only, i.e. there are no “moving parts” involved at all. So imaging resolution can be changed from job to job, within fractions of a second:



3. Variable Laser beam amount

Using a deflector allows an easy beam selection. It makes it possible to switch the amount of used beams depending on the required productivity. Currently CDIs are engraving with a maximum of 40 identical laser beams.

4. Laser source

Ageing of laser source has identical influence on all imaging beams.

→ Optics calibration constant is within maintenance period of Laser. Fiber-Laser pumped by a plurality of diodes

→ dropout of individual diode only slightly decreases output power

→ In case Laser power reduces, CDI can still produce with reduced drum speed

3.3 CDI Engine control

Grapholas® is a Windows (or Linux) based control software with a graphical user interface that runs on a CDI built-in PC. This technology is common to **ALL** CDIs.

It contains 3 main interfaces:

1. **Merger:** Powerful software for assembling several jobs onto a plate.
2. **Expose:** Queue manager
3. **Bitmap Viewer:** Powerfull bitmap viewer.

Electronic control of the CDI is based on a CAN-BUS Input/Output board. This standard is also used in the car industry (→ very reliable).

A CDI is remotely accessible for error diagnostic.

4 Digital Flexo Hardware

4.1 CDI Spark 2120

The CDI Spark 2120 specifically addresses the tag and label market, folding carton and small volume Flexo or Letterpress plate producers. The CDI Spark 2120 comes with EasyClamp for enhanced plate loading.



4.1.1 Type of imager

- Plate only CTP
- External drum design.
- Maximum plate format 21"x20" (533 mm x 508 mm)

Options:

- HighRes optics 10 (2540-4000PPI)
- Magnetic Drum (Steelback Letterpress plates)

4.1.2 Image quality

- Screen rulings: up to 200 lpi, depending on imaging resolution
- Halftone 1-99%
- Resolutions: fully variable from 2000 to 2540 ppi on job-to-job base

4.1.3 Productivity

Imaging times for DuPont Cyrel® digital Flexo plates (format 21"x20") at 2540 dpi (full plate)

OPTICS 10 **16min/plate** **1.0m²/h**

4.1.4 RIP SW & Input format

EskoArtwork FlexRip 2120 is optionally available on for the Spark 2120.

The input file format is LEN or TIFF, compatible with all CDI family members.

4.1.5 Plates

- All digital photopolymer plates, ablative film, polyester-base letterpress plates, Steel back Letterpress plates (with magnetic drum option) as well as chemistry free offset plates from Presstek
- Usable plate thickness: 0.030" to 0.155" / 0.76 mm to 3.94 mm
Sizes up to 21" x 20" / 533 mm x 508 mm (or smaller)

4.2 CDI Spark 2530

The CDI Spark 2530 specifically addresses the tag and label market, folding carton and small volume Flexo plate producers in general.

The CDI Spark 2530 comes with EasyClamp for enhanced plate loading.



4.2.1 Type of imager

- Plate only CTP
- External drum design
- Maximum plate format 25" x 30" (635mm x 762mm)

Options:

- HighRes optics 15 / 25 (2540 → 4000PPI)
- SecuFlex optics (4000 and 8000PPI)
- Magnetic Drum (Steel back Letterpress plates)
- Magnetic-Vacuum drum (Steel back and Foil based plates)

4.2.2 Image Quality

- Screen rulings: up to 200 lpi, depending on imaging resolution
- Halftone 1-99%
- Resolutions: fully variable from 2000 to 2540PPI

4.2.3 Productivity

Imaging times for DuPont Cyrel[®] digital Flexo plates (format 25"x30") at 2540 dpi (full plate)

- **OPTICS 15** **20min** **1.5m²/h**
- **OPTICS 25** **12min** **2.5m²/h**

4.2.4 RIP SW & Input format

Optional available is the EskoArtwork FlexRip 2530.

The input file format is LEN or TIFF, compatible with all CDI family members.

4.2.5 Plates

- All digital photopolymer plates, ablative film, polyester-base letterpress plates, Steel back Letterpress plates (with magnetic drum option) as well as chemistry free offset plates from Presstek
- Usable plate thickness: 0.030" to 0.155" / 0.76 mm to 3.94 mm
- Sizes up to 25" x 30" / 635mm x 762 mm (or smaller)

4.3 CDI Spark 4835

The CDI Spark 4835 specifically addresses the small and medium volume label and folding carton Flexo plate makers and converters.

The CDI Spark 4835 comes with the automated EasyClamp III for enhanced plate loading.



4.3.1 Type of imager

- Plate only CTP
- External drum design
- Maximum plate format 48" x 35" (1200mm x 900mm)

Options:

- HighRes optics 15 / 25 / 40 (2540 → 4000PPI)
- SecuFlex optics (4000 and 8000PPI)
- Magnetic Drum (Steel back Letterpress plates)
- Magnetic-Vacuum drum (Steel back and Foil based plates)

4.3.2 Image Quality

- Screen rulings: up to 200 lpi, depending on imaging resolution
- Halftone 1-99%
- Resolutions: fully variable from 2000 to 2540PPI

4.3.3 Productivity

Imaging times for DuPont Cyrel® digital Flexo plates (format 48"x35") at 2540 dpi (full plate)

- | | | |
|-------------|--------------|---------------------------|
| • OPTICS 15 | 43min | 1.5m²/h |
| • OPTICS 25 | 26min | 2.5m²/h |
| • OPTICS 40 | 16min | 4.0m²/h |
| • OPTICS 80 | 8min | 8.0m²/h |

4.3.4 Input format

The input file format is LEN or TIFF, compatible with all CDI family members.

4.3.5 Plates

- All digital photopolymer plates, ablative film, polyester-base letterpress plates, Steel back Letterpress plates (with magnetic drum option) as well as chemistry free offset plates from Presstek
- Usable plate thickness: 0.030" to 0.255" / 0.76 mm to 6.35 mm
- Sizes up to 48" x 35" / 1200mm x 900mm (or smaller)

4.4 CDI Spark 4260

The CDI Spark 4260 addresses the highest quality Flexo applications, primarily in the flexible packaging, with inroads also in corrugated.

The CDI Spark 4260 comes with the automated EasyClamp III for enhanced plate loading.



4.4.1 Type of imager

- Plate only CTP
- External drum design
- Maximum plate format 42" x 60" (1067mm x 1524mm)

Options:

- HighRes optics 15 / 25 / 40 (2540 → 4000PPI)

4.4.2 Image Quality

- Screen rulings: up to 200 lpi, depending on imaging resolution
- Halftone 1-99%
- Resolutions: fully variable from 2000 to 2540PPI

4.4.3 Productivity

Imaging times for DuPont Cyrel® digital Flexo plates (format 42"x60") at 2540 dpi (full plate)

- | | | |
|-------------|--------------|---------------------------|
| • OPTICS 15 | 64min | 1.5m²/h |
| • OPTICS 25 | 38min | 2.5m²/h |
| • OPTICS 40 | 24min | 4.0m²/h |
| • OPTICS 80 | 12min | 8.0m²/h |

4.4.4 Input format

The input file format is LEN or TIFF, compatible with all CDI family members.

4.4.5 Plates

- All digital photopolymer plates, ablative film, polyester-base letterpress plates, Steel back Letterpress plates (with magnetic drum option) as well as chemistry free offset plates from Presstek
- Usable plate thickness: 0.030" to 0.255" / 0.76 mm to 6.35 mm
- Sizes up to 42" x 60" / 1067mm x 1524mm (or smaller)

4.5 CDI Spark 5080

The CDI Spark 5080 addresses the highest quality Flexo applications for the corrugated and flexible packaging market.

The CDI Spark 5080 comes with the automated EasyClamp III as well as with an air table for enhanced and convenient plate loading.



4.5.1 Type of imager

- Plate only CTP
- External drum design
- Maximum plate format 50" x 80" (1270mm x 2032mm)

Options:

- HighRes optics 15 / 25 / 40 (2540 → 4000PPI)

4.5.2 Image Quality

- Screen rulings: up to 200 lpi, depending on imaging resolution
- Halftone 1-99%
- Resolutions: fully variable from 2000 to 2540PPI

4.5.3 Productivity

Imaging times for DuPont Cyrel[®] digital Flexo plates (format 50"x80") at 2540 dpi (full plate)

• OPTICS 15	100min	1.5m²/h
• OPTICS 25	61min	2.5m²/h
• OPTICS 40	38min	4.0m²/h
• OPTICS 80	19min	8.0m²/h

4.5.4 Input format

The input file format is LEN or TIFF, compatible with all CDI family members.

4.5.5 Plates

- All digital photopolymer plates, ablative film, polyester-base letterpress plates, Steel back Letterpress plates (with magnetic drum option) as well as chemistry free offset plates from Presstek
- Usable plate thickness: 0.030" to 0.255" / 0.76 mm to 6.35 mm
- Sizes up to 50" x 80" / 1270mm x 2032mm (or smaller)

4.6 CDI Compact Cantilever

The CDI Compact 4835 serves the middle-format highest quality Flexo applications, including the flexible packaging and folding carton-printing markets.



4.6.1 Type of imager

- Sleeve and plate imaging CTP
- Sleeve capability: max sleeve length up to 51" / 1300mm

Options:

- Drum 4230: up to plate format 42"x30" (1067 mm x 762 mm) or smaller
- Drum 4835 and 4835 C (EasyClamp): up to plate format 47.2" x 35.4" (1200 x 900 mm) or smaller

4.6.2 Image quality

- Screen rulings: up to 200 lpi, depending on imaging resolution
- Halftone 1-99%
- Resolutions: fully variable from 2000 to 4000 ppi on job-to-job base.

4.6.3 Productivity

Imaging times for DuPont Cyrel® digital Flexo plates at 2000 ppi

	Optics 40		Optics 25		Optics 15	
Imaging productivity	4.0 m ² /hr		2.5 m ² /hr		1.5 m ² /hr	
Optional Plate format	42"x 30"	1200 x 900 mm	42"x 30"	1200 x 900 mm	42"x 30"	1200 x 900 mm
Imaging time	12 min.	16 min.	19 min.	26 min.	32 min.	43 min.

4.6.4 Plates

- All digital photopolymer plates, ablative film, polyester-base letterpress plates, Steel back Letterpress plates (with magnetic drum option) as well as chemistry free offset plates from Presstek
- Thickness: 0.76 mm – 6.35 mm (0.030" - 0.255"), thicker plates when available
- Sizes up to: 42" x 30" / 1067 mm x 762 mm (or smaller)
47.2" x 35.4" / 1200 mm x 900 mm

4.7 CDI Advance Cantilever

The CDI Advance Cantilever addresses the highest quality Flexo applications for the corrugated and flexible packaging market.



4.7.1 Type of imager

- Sleeve and plate imaging CTP
- Sleeve capability: max sleeve length up to 69" / 1750mm

Options:

- Drumsleeve (5080 ECIII) to load plates 50" x 80" (1270mm x 2032mm)

4.7.2 Image Quality

- Screen rulings: up to 200 lpi, depending on imaging resolution
- Halftone 1-99%
- Resolutions: fully variable from 2000 to 2540PPI

4.7.3 Productivity

Imaging times for DuPont Cyrel[®] digital Flexo plates (format 50"x80") at 2540 dpi (full plate)

- | | | |
|-------------|---------------|---------------------------|
| • OPTICS 15 | 100min | 1.5m²/h |
| • OPTICS 25 | 61min | 2.5m²/h |
| • OPTICS 40 | 38min | 4.0m²/h |
| • OPTICS 80 | 19min | 8.0m²/h |

4.7.4 Input format

The input file format is LEN or TIFF, compatible with all CDI family members.

4.7.5 Plates

- All digital photopolymer plates, ablative film, polyester-base letterpress plates, Steel back Letterpress plates (with magnetic drum option) as well as chemistry free offset plates from Presstek
- Usable plate thickness: 0.030" to 0.255" / 0.76 mm to 6.35 mm
- Sizes up to 50" x 80" / 1270mm x 2032mm (or smaller)

4.8 CDI Advance 5080 (Discontinued)



The CDI Advance 5080 addresses the highest quality Flexo applications, primarily in the flexible packaging and folding carton markets, with inroads also in corrugated.

The CDI Advance 5080 comes with the automated EasyClamp III as well as with an air table for enhanced and convenient plate loading.



4.8.1 Type of imager

- Plate and Sleeve capable CTP
- External Drum Design
- Drum 4260 and 4260 C (EasyClamp): max. Plate format 42"x60" (1067 mm x 1524 mm) or smaller
- Drum 5080 and 5080 C (EasyClamp): max. Plate format 50"x80" (1270 mm x 2032 mm)

Options:

- Sleeve option: max sleeve length up to 83" / 2110mm)

4.8.2 Imaging quality

- Screen rulings: up to 200 lpi, depending on imaging resolution
- Halftone 1-99%
- Resolutions: fully variable from 2000 to 4000 ppi on job-to-job base.

4.8.3 Productivity

Imaging times for DuPont Cyrel® digital Flexo plates at 2000 ppi

	Optics 80		Optics 40		Optics 25		Optics 15	
Plate format	42"x60"	50"x80"	42"x60"	50"x80"	42"x60"	50"x80"	42"x60"	50"x80"
Imaging time	12 min.	19 min	24 min	38 min	38 min	60 min	64 min	100 min
	8.0m ² /h	8.0m ² /h	4.0m ² /h	4.0m ² /h	2.5m ² /h	2.5m ² /h	1.5m ² /h	1.5m ² /h

4.8.4 Plates

- All digital photopolymer plates, ablative film, polyester-base letterpress plates, Steel back Letterpress plates (with magnetic drum option) as well as chemistry free offset plates from Presstek
- Plate thickness: 0.030" to 0.255" / 0.76 mm to 6.35 mm
 Sizes up to: 42" x 60" / 1067 mm x 1524 mm (or smaller)
 50" x 80" / 1270 mm x 2032 mm (or smaller)

4.9 CDI Compact 4835 (Discontinued)

The CDI Compact 4835 serves the middle-format highest quality Flexo applications, including the flexible packaging and folding carton-printing markets.



4.9.1 Type of imager

- External Drum Design
- Drum sizes
- Drum 4230: up to plate format 42"x30" (1067 mm x 762 mm) or smaller
- Drum 4835 and 4230 C (EasyClamp): up to plate format 47.2" x 35.4" (1200 x 900 mm) or smaller

Options:

- Sleeve option: max sleeve length up to 51" / 1300mm

4.9.2 Image quality

- Screen rulings: up to 200 lpi, depending on imaging resolution
- Halftone 1-99%
- Resolutions: fully variable from 2000 to 4000 ppi on job-to-job base.

4.9.3 Productivity

Imaging times for DuPont Cyrel[®] digital Flexo plates at 2000 ppi

	Optics 40		Optics 25		Optics 15	
Plate format	42"x 30"	1200 x 900 mm	42"x 30"	1200 x 900 mm	42"x 30"	1200 x 900 mm
Imaging time	12 min.	16 min.	19 min.	26 min.	32 min.	43 min.
Imaging productivity	4.0 m ² /hr	4.0 m ² /hr	2.5 m ² /hr	2.5 m ² /hr	1.5 m ² /hr	1.5 m ² /hr

4.9.4 Plates

- All digital photopolymer plates, ablative film, polyester-base letterpress plates, Steel back Letterpress plates (with magnetic drum option) as well as chemistry free offset plates from Presstek
- Thickness: 0.76 mm – 6.35 mm (0.030" - 0.255"), thicker plates when available
- Sizes up to: 42" x 30" / 1067 mm x 762 mm (or smaller)
47.2" x 35.4" / 1200 mm x 900 mm

4.10 Options

4.10.1 Cantilever Sleeve Option

The **Cantilever option** is standard on the CDI Advance Cantilever and on the CDI Compact Cantilever. It is optional on the CDI Classic.

The cantilever allows the fastest and most efficient way of producing sleeves. The fully automated Tailstock allows a secure and fast sleeve exchange. No manual intervention is required to move the tailstock out of the working area.



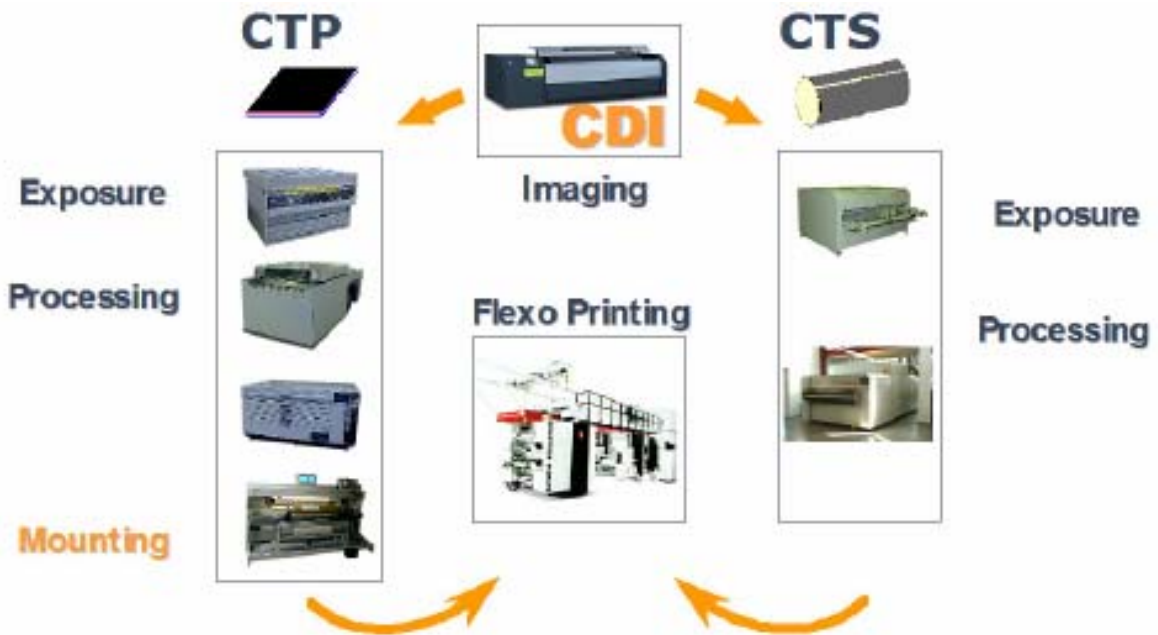
Additionally a drumsleeve can be sled onto the cantilever arm for plate production.



The Sleeve Cantilever option is **NOT** field upgradeable.

4.10.2 Sleeve Option (mandrel exchange workflow)

The **Sleeve option** is only available for the CDI Advance, CDI Compact and the CDI Classic. The sleeve option is field upgradeable. It requires additional mandrels for sleeve preparation outside the machine. It is the most cost effective to turn your CDI into a sleeve capable CTP.



Benefits from CTS (Computer-to-Sleeve)

- **No mounting**, No tape, No de-mounting
→ No need to worry any more about mounting, any tape or damaged plates after demounting
- **Quicker register** / shorter set up time
→ just 3-10 minutes per color, 30-60 minutes per job
- **Higher press speed**
→ 10% to more than 30% higher press speed demonstrated
- **Longer cleaning intervals**
→ less ink built-up results in ~ 50% time saving for cleaning
- **Higher press utilization**
→ shorter set up time + longer cleaning intervals + higher speed
- **Big savings** with every repeat job
→ break even versus plates: sleeves are likely to be cheaper than plates between 1st and 3rd repeat
- **Quality** → Higher accuracy + better consistency, real endless designs

Sleeve Concept

- Sleeves are mounted on a special, lightweight mandrel, which can be mounted and dismounted using a small hand-crane or even by hand only.
- The number of mandrels needed to cover different repeats is limited to 5 by the use of carrier sleeves (bridge sleeves).
- Most commercial available print sleeves can be used, e.g. Kevlar[®], Nickel[®] and Mylar[®] sleeves.
- Seamless coated digital Flexo sleeves and sleeves with pre-mounted digital Flexo plates can be imaged.

- The sleeve option still enables the quick changeover to a vacuum drum for plate imaging on job-to-job base.



Sleeve/Mandrel Specs

- Standard mandrel length for CDI Advance 5080 and CDI CLASSIC:
 - 1750 mm (max. length of custom-made mandrels 2110 mm).
 Standard mandrel length for CDI Compact 4835/Cantilever:
 - 1300 mm (equal to maximum imaging length)
- Max. Weight of mandrel with mounted carrier sleeve and print sleeve: 300kg
- Shaft diameter at headstock side: 40mm
- Shaft tailstock with pre-mounted bearing

4.10.3 Letterpress Option

The **Letterpress option** comes as a Magnetic Drum or as a Magnetic-Vacuum Drum. It allows the CDI to make steel back / foil based Letterpress plates as well as flexo plates. Check the CDI details to see which drum is available for each system.

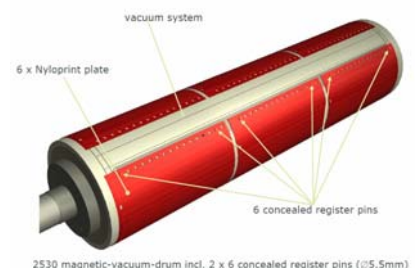
The **MAGNETIC DRUM** (no vacuum) is designed to image steel back letterpress plates only. Retractable and/or fixed registration pins can be added to the drum design. This design is to be defined directly upon ordering the system. Delivery time is minimum **8 weeks after** obtaining the customer's approved drum layout!

Magnetic Drum size: 635mm x 815mm (25" x 32")



The **MAGNETIC-VACCUM DRUM** is designed to image steel back and foil back letterpress plates, flexo plates and ablative film. Contact us for other plate types. This drum does not have an Easy Clamp. Retractable and/or fixed register pins can be added to the drum design. This design is to be defined directly upon ordering the system. Delivery time is minimum **8 weeks after** obtaining the customer's approved drum layout!

Magnetic-Vacuum Drum size: 635mm x 815mm (25" x 32")



Customized registration pins ensure a perfect press registration.

4.10.4 HighRes Option

The **HighRes option** allows the CDI to run a variable resolution between 2540ppi and 4000ppi to obtain the highest quality on a flexo or letterpress plate. It is especially designed to address the growing quality demand in the label market.

The HighRes option can be fitted on all CDI SPARKs limited to OPTIC40. Contact us if you have a different project.

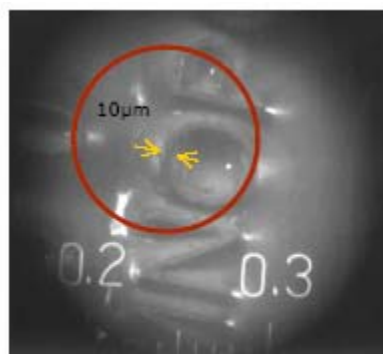
4.10.5 SecuFlex Option

The **SecuFlex option** answers the highest quality demands of the flexo and Letterpress market. Its main target is the security printing business. A SecuFlex optics can be fitted (also as upgrade) on any CDI.

- The CDI SecuFlex delivers digital Flexo plates suitable to be used for high-quality security printing applications.
- The CDI SecuFlex comes with EasyClamp for enhanced plate loading.
- Productivity:
1,0 m²/h @ 8000 ppi
1,0 m²/h @ 4000 ppi



1 point Kanji type
On imaging layer
(Before processing)



60µm micro type
On processed
flexo plate

4.10.6 EasyLoad

The plate loading table “EasyLoad” maintains safe, damage-free and distortion-free plate handling through the entire plate making process

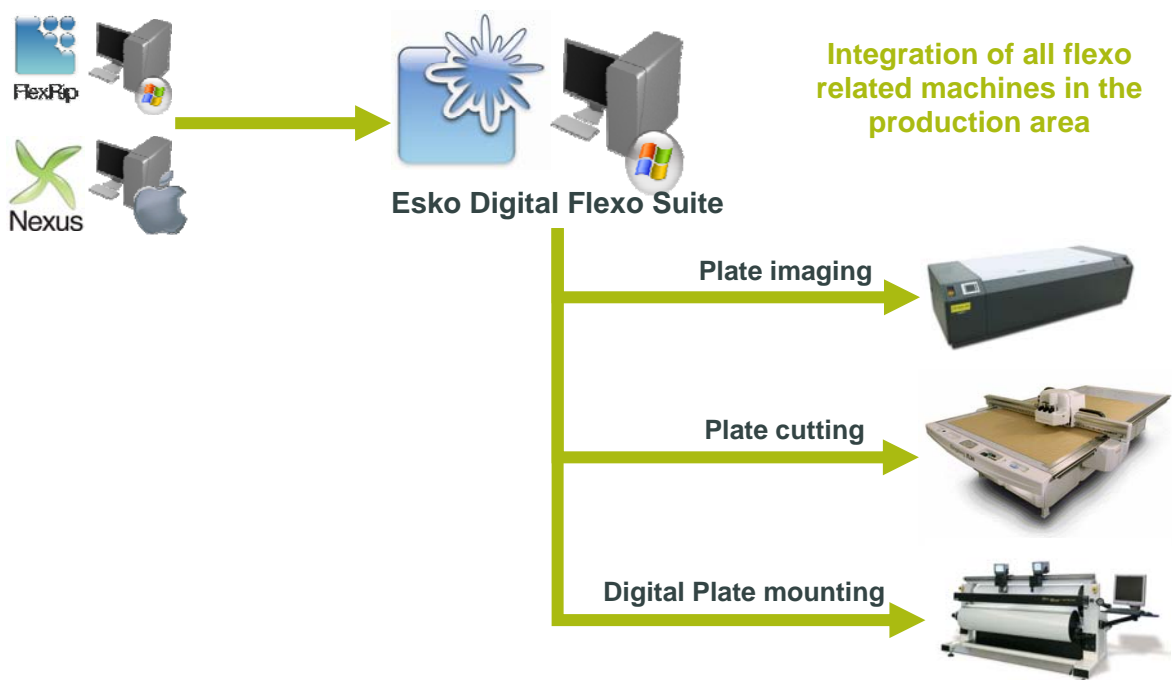
- Loading and unloading to Imager, UV-Exposer, Washer etc.
- Includes plate cutting feature
- It can be tilted to reach various heights



5 Digital Flexo Software

Designed and built from the ground up for digital flexography, the CDI is part of a comprehensive total solution. It seamlessly integrates with EskoArtwork's Software Suite for Packaging workflow or can be combined with any third party components.

As the market leader in packaging prepress and preproduction, EskoArtwork offers a complete solution in which the CDI seamlessly integrates.



The Grapholas®, the dedicated CDI front end, accepts 1-bit TIFF or LEN-files from any RIP. The Merger functionality of the Grapholas® arranges your jobs on the virtual plate and sends them subsequently to the Exposer, which drives the CDI and makes sure the jobs get imaged.

5.1 Merger

The MERGER is a part of Grapholas® (on all CDI's), Plateprep and all EskoArtwork Digital Flexo Suites. It is a powerful job assembling tool to reduce plate or film wastage.

- Combination of different jobs, even ripped for different print repeats, onto the same Flexo plate
- Enhanced step & repeat
- Crop and auto-crop feature
- Mirroring, inverting, turning of jobs and/or job separations
- Manual and automatic job placement feature
- With the Tiff output option, other CTP/CTF makes can be driven
- Unique Flexo-dedicated features:
 - plate usage optimization
 - automatic cut-marks and border space generation feature
 - full seamless sleeve and plate-on-sleeve support

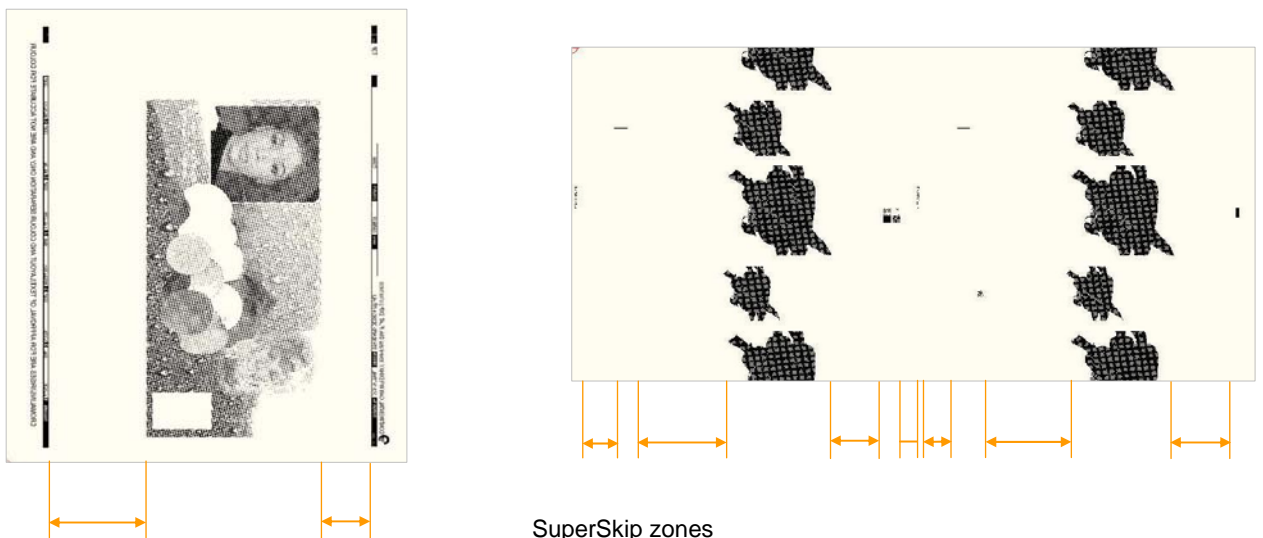
In addition, EskoArtwork's **SuperSkip**, a function within the Grapholas® control software, increases imaging productivity by 'skipping' areas on the plate which do not contain any information to be imaged. SuperSkip is particularly helpful in the production of sleeves.

Productivity advantages with SuperSkip:

For sheets: between 10% and 400%

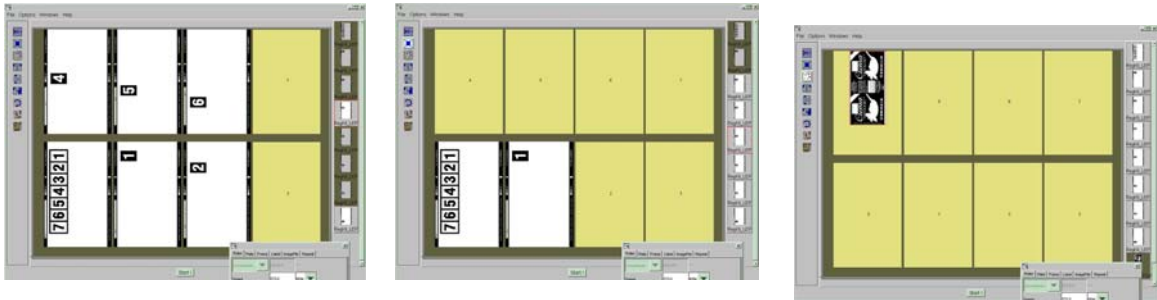
For sleeves: up to 1000%

SuperSkip info is added automatically to LEN- and Tiff-files before imaging.



Grapholas® **Templates** enable easy positioning of images by drag and drop. This workflow is especially designed for the most convenient Letterpress plate and sleeve manufacturing.

- Predefine your jobs
- Positioning by Drag and Drop
- Setup according to your demands



A clear plate report is automatically generated after each imaged plate (html format). It can be used for output control as well as for invoicing purposes.

It contains:

- Basic job information (name, date, CDI n°, ...)
- Plate information (thickness, type, size, ...)
- Images which were positioned on the plate (size and name of each cliché)
- Effective plate usage (wastage report)

Job information

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Job:

Job name:	KO08_Halfplate_corner
Date:	09 Jan 2008 11:54:14
CDI:	127.0.0.1
Circumference:	1290.0mm
Speed:	500.0 RPM
Power:	35.0 W

Plate:

Plate name:	DPS67
Type:	PARTIALPLATE
Plate width:	900.0mm
Plate height:	550.0mm
Total size:	0.495 sqm
Wasteage:	0.119 sqm

Images:

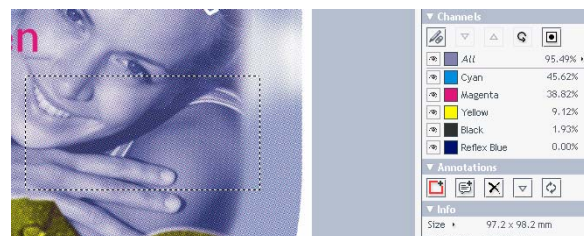
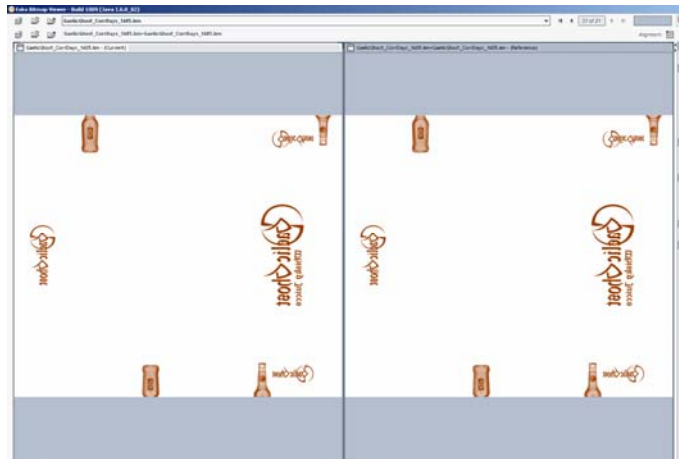
Name	Width [mm]	Height [mm]	Area [sqcm]
GaelicGhost_CorrDays_1605_1.len	206.95	98.03	202.873
GaelicGhost_CorrDays_1605_1_rot.len	206.95	98.03	202.873
GaelicGhost_CorrDays_1605_2.len	72.3	133.87	96.788
GaelicGhost_CorrDays_1605_3.len	119.32	72.31	86.28
GaelicGhost_CorrDays_1605_3_rot.len	119.32	72.31	86.28
GaelicGhost_CorrDays_1605_4.len	125.91	203.92	256.756
GaelicGhost_CorrDays_1605_5.len	152.03	336.2	511.125
GaelicGhost_CorrDays_1605_6.len	201.7	118.46	238.934
GaelicGhost_CorrDays_1605_6_rot.len	118.46	201.7	238.934
GaelicGhost_CorrDays_C_1.len	133.87	72.3	96.788
GaelicGhost_CorrDays_C_2.len	119.32	72.31	86.28
GaelicGhost_CorrDays_C_2_rot.len	119.32	72.31	86.28
GaelicGhost_CorrDays_C_3.len	72.18	125.91	90.882
GaelicGhost_CorrDays_C_4.len	69.68	111.78	77.888
GaelicGhost_CorrDays_K_3.len	182.94	474.93	868.837
GaelicGhost_CorrDays_Y_1.len	133.87	76.18	101.982
GaelicGhost_CorrDays_Y_2.len	119.32	76.12	90.826
GaelicGhost_CorrDays_Y_3.len	72.18	125.91	90.882
GaelicGhost_CorrDays_Y_4.len	111.78	69.76	77.978

Net used: 3589.467 sqcm

5.2 Bitmap Viewer

A powerfull QA-tool for visual job inspection

- File comparison for error or difference control
 - Load 2 files
 - Automatic zoom on both files
- Automatic horizontal and vertical seamless check
- Highlights overprint areas between selected separations
 - User selectable colours
- Automatic LPI/angle measuring
 - “just draw a rectangle where you want to measure”
 - Error proof
- Dot % check
 - Based on simple rectangle
 - Across all active separations

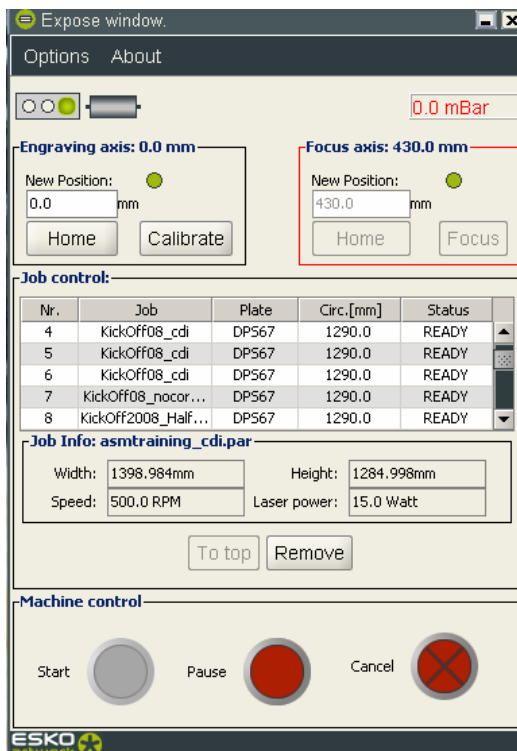


The Bitmap Viewer is delivered with Grapholas® (all CDI's), Plateprep, Platepatcher and all the EskoArtwork Digital Flexo Suites.

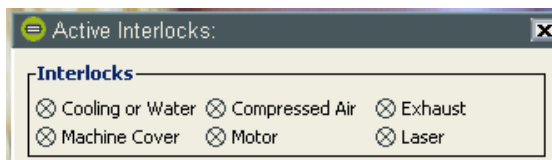
5.3 Exposer

The Grapholas® Exposer is the interface between the user and the CDI. The Grapholas® Exposer drives the CDI. It provides you with fundamental machine information and the list of jobs waiting to be imaged (Queue manager). These are the jobs, or plates, that you prepared with the Grapholas® Merger or the PlatePrep.

The Exposer is a part of Grapholas® and onboard each CDI.

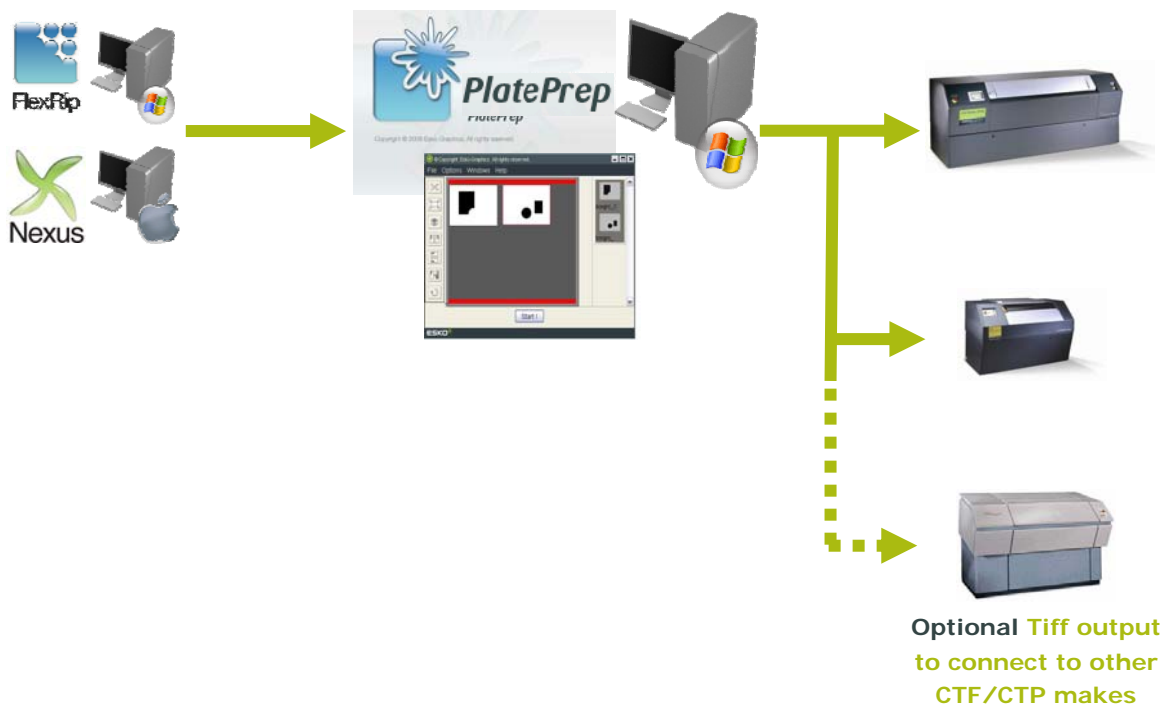


Clear and simple overview of possible technical issues



5.4 PlatePrep

The PlatePrep is a separate station (PC in the CDI network) which allows job and plate preparation during plate imaging without using the Grapholas® controller that drives the CDI. For detailed features of the plateprep please check the MERGER paragraph (5.1).



Having the same appreciated interactive Grapholas® look and feel, PlatePrep allows for "uninterrupted" imaging on the CDI, because the preparation of the next plate – which was already RIPed into .LEN format – is now executed during imaging of the current plate.

The PlatePrep software runs on a PC with Windows NT, 2000, XP or 2003, provided by the customer. The workstation with the PlatePrep software can be placed anywhere in the network and does not have to be installed in the neighborhood of the CDI. This is the ideal solution for those sites where the prepress department carries out the job and plate preparation, while the CDI is physically positioned in the plate-making department. For CDIs driven by a SUN Computer, the SUN is only required for job launching, no longer for job preparation or job viewing.

The plate preparation executed on the PlatePrep diminishes the workload on the Grapholas® SUN or PC controller. As a result, no valuable production time is lost because the CDI is no longer idle while the operator does the job preparation.

It is ideal for backup purposes as all information is now stored on 1 central PC.

These advantages significantly increase the throughput on the CDI, especially in the case of the CDIs equipped with Optics 40 or Optics 80.

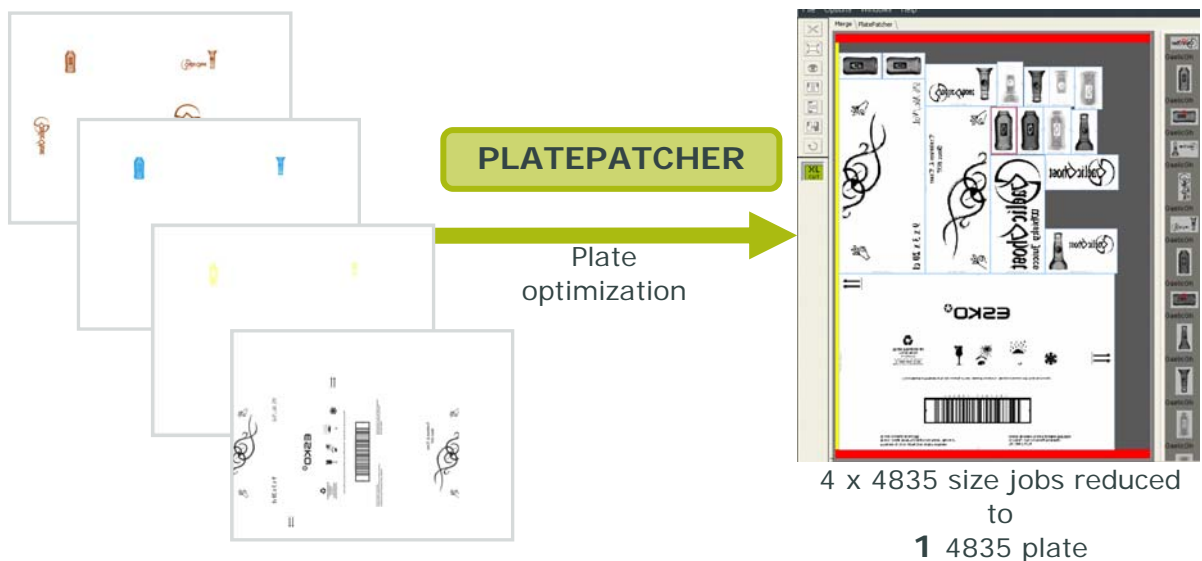
Please also use and read the Merger and Bitmap Viewer section as they are part of the PlatePrep description.

5.5 PlatePatcher

PlatePatcher is the name of the program which is capable of analyzing screened image separations and splitting them into smaller individual components to optimize plate usage. The PlatePatcher can be purchased as standalone or as part of the Digital Flexo Suite for corrugated.

The standalone version is typically installed in the prepress department (remote from the production area).

PlatePatcher as standalone version will write the resulting patches in a folder. The patches can then either be uploaded in the PlatePrep or directly in the Merger of the CDI.



It is recommended in all cases that the PlatePatcher application is run on a separate computer as it is memory and processor intensive.

The PlatePatcher has the following functionalities:

1. Identification of the patch in a screened separation
2. Grouping / ungrouping patches
3. Addition of register marks for mounting the patches
4. Labeling of the patches
5. Plate material saving report (HTML)
6. Optional: Generation of a control file for semi-automatic mounting (Cyrel Macroflex, AV Flexologic Optimount)
7. Generation of an EPS Plot file for manual (round) mounting
8. Generation of an ACM Plot file for manual (flat) mounting
9. Visualization of the die cut (if CF2 File is present) and the resulting patches
10. Print overview images of individual color separations

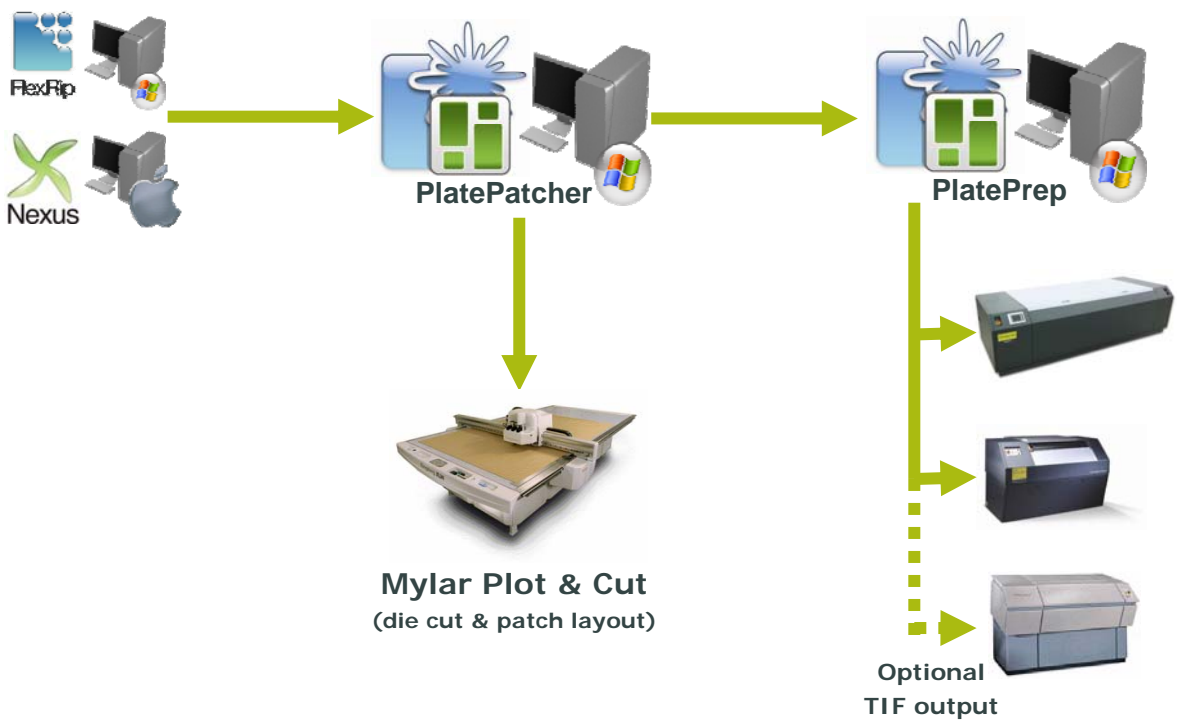
How can PlatePatcher (standalone) be integrated in the Prepress Workflow?



PlatePatcher can have more than more than one seat. It is typically located in the prepress department whereas the resulting patches are uploaded onto the CDI.

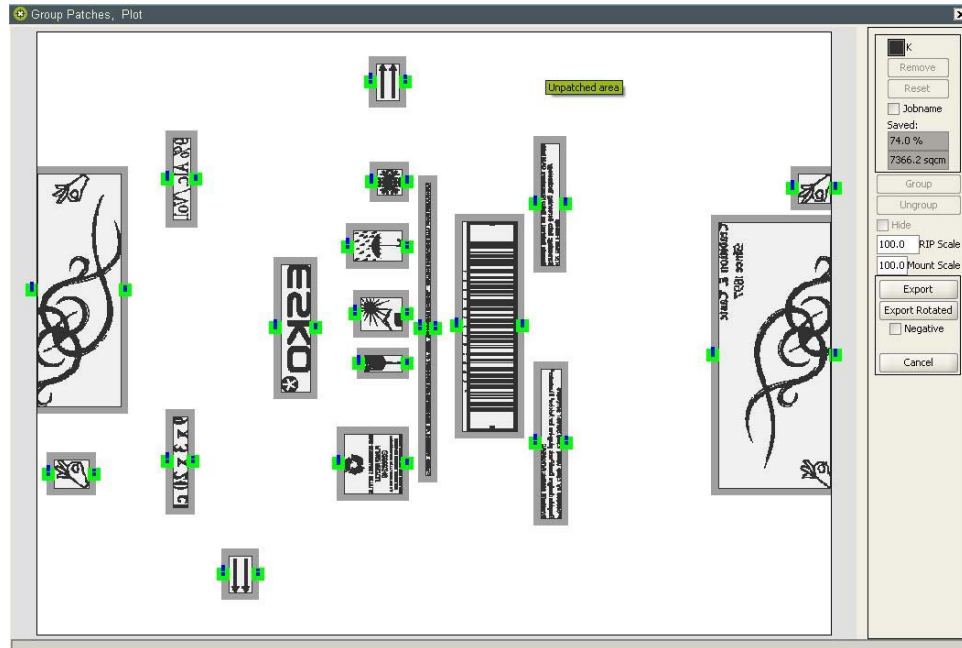
If there is more than one CDI, a typical configuration would be a connection to a PlatePrep. This would ensure the safest way of working as well as central data storage.

If flexo plate cutting is required it should be in a Digital Flexo Suite environment. Please also check the Digital Flexo Suite for Corrugated.

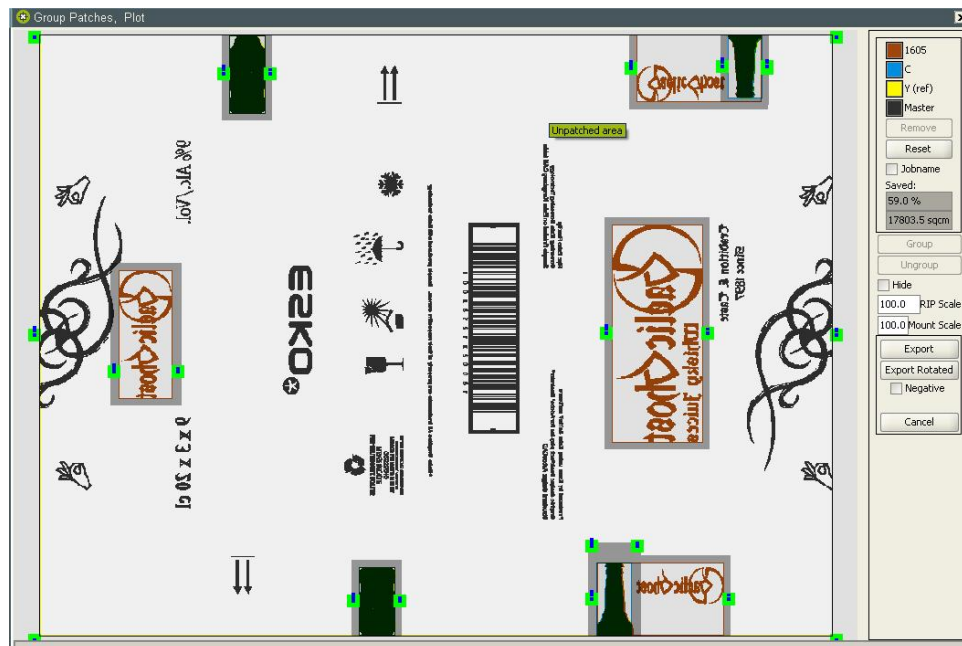


How can I patch?

- SINGLE patch:** All separations are treated as individual files resulting in the highest platesaving. All separations are edited in sequence. The coordinates of all created register marks are saved in a MOM, DHM or EPS file.



- MULTIPLE patch:** All separations are displayed and edited together. The selected “master” separation is not cut and receives the register marks of all other separations after “patching”. During mounting, you can then refer to the register marks on the “master” in order to improve fitting accuracy.



5.6 Digital Flexo Suite for Labels

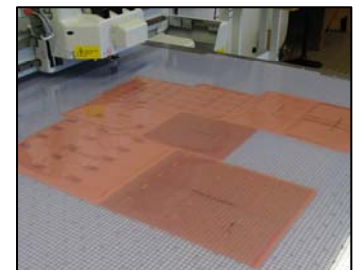
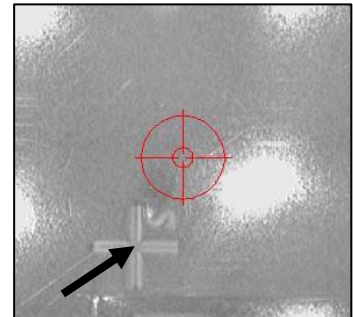
The Digital Flexo Suite for Labels is a powerful and easy-to-handle workflow automation for flexo plate making. It significantly reduces errors as well as labor.

The Digital Flexo Suite for Labels is a software bundle which contains tools to enhance the plate making. It includes PlatePrep, customizable Hotfolders and Flexo plate cutting.

Workflow Principle:

TIF or LEN files are uploaded into the Digital Flexo Suite and merged to reduce plate wastage. Once imaging parameters have been selected, the filled plate is sent to the CDI. At the same time (without operator intervention) a cutting layout is sent to the queue of the Kongsberg cutting table. Both the CDI file (LEN) and the Kongsberg file (ACM) carry identical names. This name, as well as 2 registration cross marks, are automatically imaged on the flexo plate (for later identification and registration).

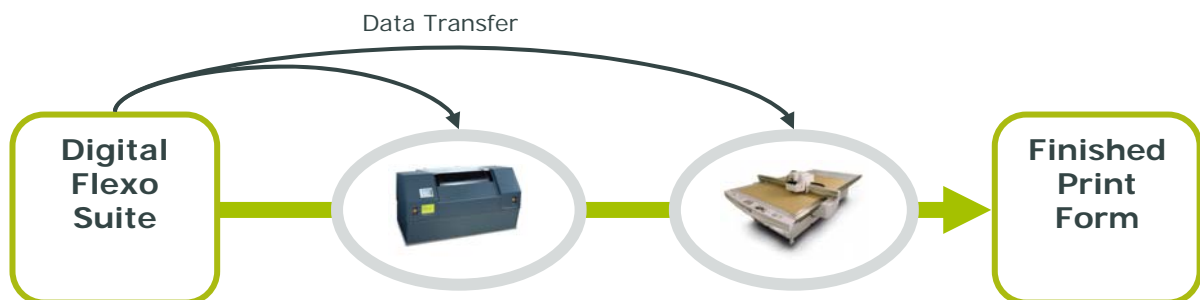
The built-in camera allows fastest and most accurate registration of the images. Two mouse clicks and the cutting sequence is started. Using its accuracy and speed, plates are perfectly cut for direct press mounting without monopolizing the operator's precious time. The washed out flexo plate is now labeled (job name is plotted on the back of the flexo plate) and cut by the Kongsberg table.



Leading to the following conclusion:

- Automated flexo plate cutting
- Significant error reduction
- Significant labor costs reduction
- Fast cliché identification
- Less plate wastage
- Fit to press cut in one pass

Workflow schematic:



Please also use and read the PlatePrep section as it is a part of the Digital Flexo Suite for Labels.

5.7 Digital Flexo Suite for Flexible Packaging and Folding Carton

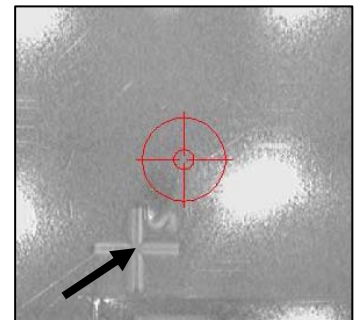
The Digital Flexo Suite for Flexible Packaging and Folding Carton is a powerful and easy-to-handle workflow automation for flexo plate making. It significantly reduces errors as well as labor.

The Digital Flexo Suite for Flexible Packaging and Folding Carton is a software bundle which contains tools to enhance the plate making. It includes PlatePrep, customizable Hotfolders and Flexo plate cutting.

Workflow Principle:

TIF or LEN files are uploaded into the Digital Flexo Suite and merged to reduce plate wastage. Once imaging parameters have been selected, the filled plate is sent to the CDI. At the same time (without operator intervention) a cutting layout is sent to the queue of the Kongsberg cutting table. Both the CDI file (LEN) and the Kongsberg file (ACM) carry identical names. This name, as well as 2 registration cross marks, are automatically imaged on the flexo plate (for later identification and registration).

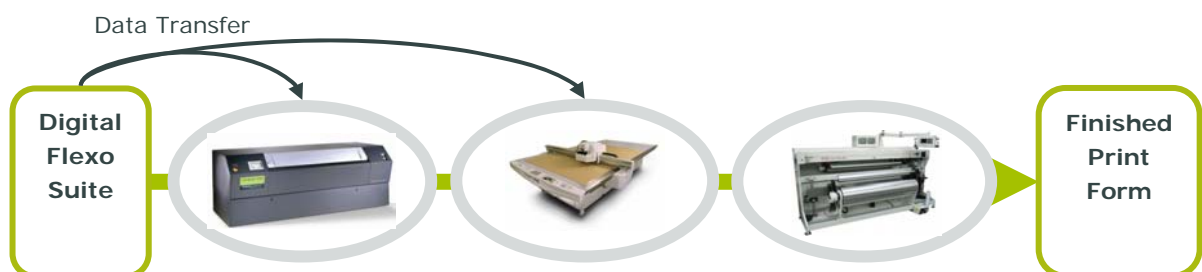
The built-in camera allows fastest and most accurate registration of the images. Two mouse clicks and the cutting sequence is started. Using its accuracy and speed, plates are perfectly cut for direct press mounting without monopolizing the operator's precious time. The washed out flexo plate is now labeled (job name is plotted on the back of the flexo plate) and cut by the Kongsberg table.



Leading to the following conclusion:

- Automated flexo plate cutting
- Significant error reduction
- Significant labor costs reduction
- Fast cliché identification
- Less plate wastage
- Fit to press cut in one pass
- Upfront cutting for Plate On Sleeve for perfect register

Workflow schematic:



Please also use and read the PlatePrep section as it is a part of the Digital Flexo Suite for Flexible Packaging and Folding Carton.

5.8 Digital Flexo Suite for Corrugated

The Digital Flexo Suite for Corrugated is a powerful and easy-to-handle workflow automation for flexo plate making. It significantly reduces errors as well as labor.

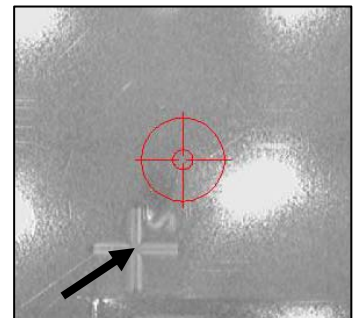
The Digital Flexo Suite Corrugated is a software bundle which contains tools to enhance the plate making. It includes PlatePrep, customizable Hotfolders, PlatePatcher and Flexo plate cutting.

Workflow Principle:

TIF or LEN files are uploaded into the PlatePatcher. The files are scanned and the resulting data/images are taken out, generating multiple smaller LEN files (TIF on option). After confirming the suggested patch draft, a layout (map) is either sent directly to the Kongsberg table (for direct Mylar plotting and cutting) or to any EPS capable 1:1 plotter/proofer for repositioning the smaller clichés. These patches are automatically dropped in the right side queue of the Merger. All labeled (+ cross marks) images can automatically or manually be placed on the plate.

Once the imaging parameters have been selected, the filled plate is sent to the CDI. At the same time (without operator intervention) a cutting layout is sent to the queue of the Kongsberg cutting table. Both the CDI file (LEN) and the Kongsberg file (ACM) carry identical names. This name, as well as 2 registration cross marks, are automatically imaged on the flexo plate (for later identification and registration).

The built-in camera allows fastest and most accurate registration of the images. Two mouse clicks and the cutting sequence is started. Using its accuracy and speed, plates are perfectly cut for direct press mounting without monopolizing the operator's precious time. The washed out flexo plate is now labeled (job name is plotted on the back of the flexo plate) and cut by the Kongsberg table.



An optional 45° bevel knife can cut the patches with a slope. The slope increases the glue contact and thus the sealing against solvent. On top of this the software can be configured to automatically cut the corners (distance can individually be set) of the patches to reduce the peeling effect. A perfect and complete solution for corrugated workflow



Leading to the following conclusion:

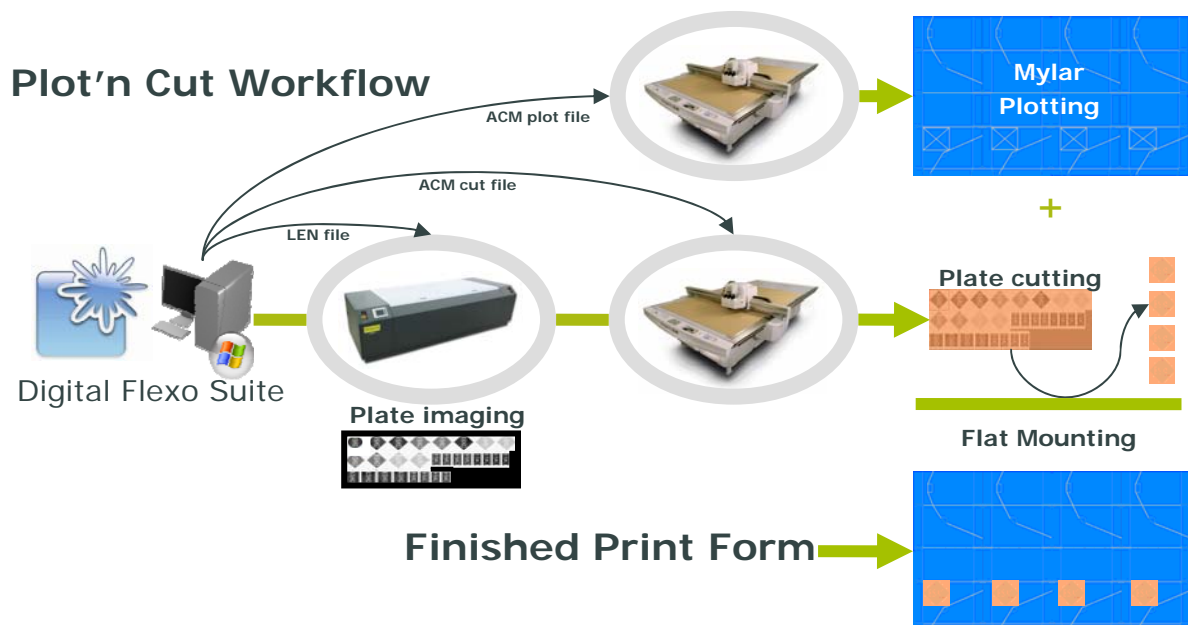
- Automated flexo plate cutting
- 45° bevel knife
- Automated corner cut
- Significant error reduction
- Significant labor costs reduction in prepress and plate production area
- Dramatic plate wastage reduction

5.8.1 “Plot’n Cut” workflow schematic (included in Digital Flexo Suite for Film, Corrugated and PlatePatcher)

The carrier sheet is plot and cut directly on the Kongsberg XL table.

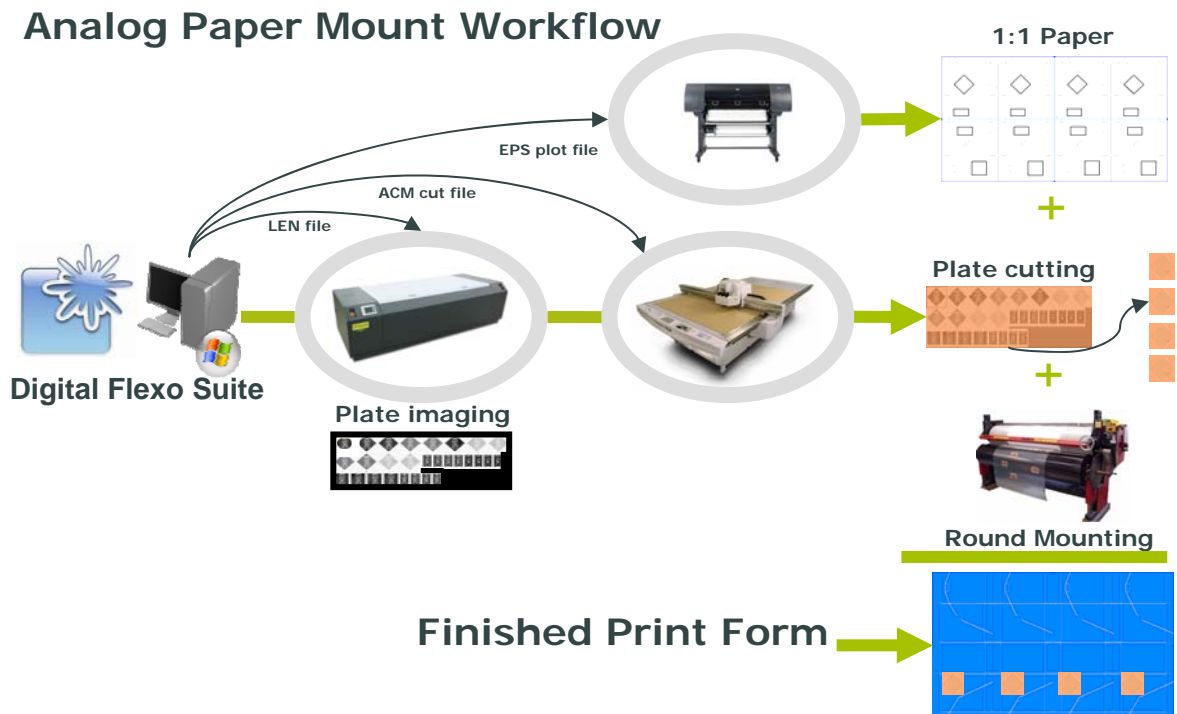
To be able to plot the die-cut on the carrier sheet, Digital Flexo Suite requires a CF2-file representing the Die-Cut (of the same size as the LEN file). The CF2 file must be ripped as technical ink (e.g. in Packedge) when ripping the job.

The CF2 and the LEN file representing the die-cut, have to be in the working directory of the Digital Flexo Suite. Adding the flexo plate cutting, the Kongsberg table is an unmatched working tool for the corrugated flexo plate manufacturing.



5.8.2 Analog Paper Mount Option (referring to previous product descriptions)

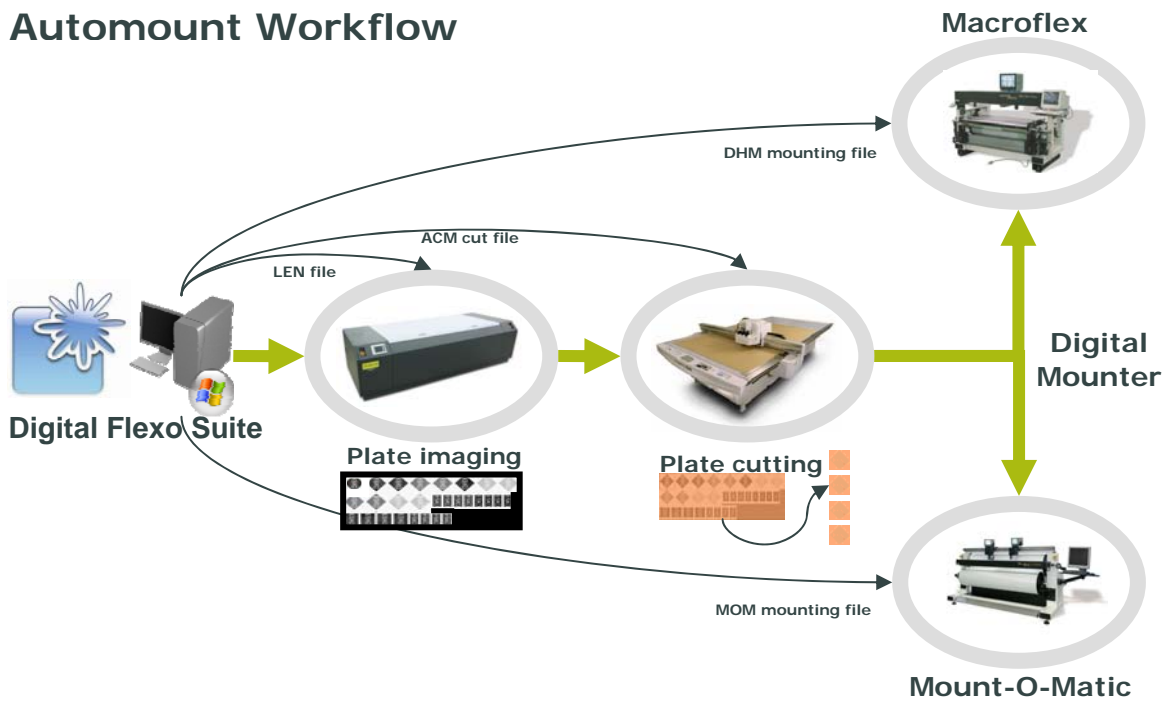
An optional EPS output channel (Analog Paper Mount Workflow) can be added to PlatePatcher, Digital Flexo Suite for Corrugated and Digital Flexo Suite for Film. It allows outputting a patch map in EPS-file format. The EPS file is typically sent to a 1:1 paper plotter such as HP, Epson or Bieffebi Mounter, to obtain a map of the patched separations. The plot will normally contain all the separations. The paper sheet is mounted on upper drum of an analog round mounter and the carrier is fixed on the lower drum. A special mirror permits taping the patches on the correct location.



5.8.3 Automount Option (referring to previous product descriptions)

An optional connection to a digital moulder can be added to the Digital Flexo Suite. The digital moulder guarantees a perfect multicolor registration. Both Du Pont Macroflex and AV Flexologic Mount-O-Matic are supported.

Automount Workflow



Please also use and read the PlatePrep & PlatePatcher sections as they are part of the Digital Flexo Suite for Corrugated.

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