



**Océ**  
TDS800  
Pro Series  
Technologies

Deliver on time



Unique technologies  
in the Océ TDS800  
Pro Series

- Océ Image Logic: unique image-processing technology
- Océ Copy Press: unique offset-like printing technology
- Productivity that's incomparable

# Deliver on time



## Océ TDS800 Pro Series Technologies

### Unique technologies in the Océ TDS800 Pro Series



At the heart of the Océ TDS800 Pro Series are the Océ Copy Press and Océ Image Logic® technologies. They provide the basis for the system's total productivity concept of quality, reliability, ease of use and throughput.

Paper jams are virtually eliminated, ozone emissions are close to zero, and print and copy quality is taken to a new level. You get crisp line drawings, clear reproduction of colour originals, smoothly rasterised documents without moiré artefacts and distortion-free photo enlargements. The result is productivity and quality you can count on: every document, every day.

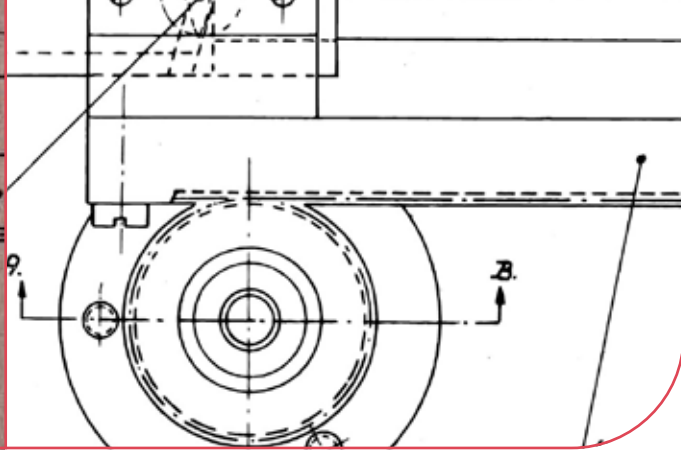
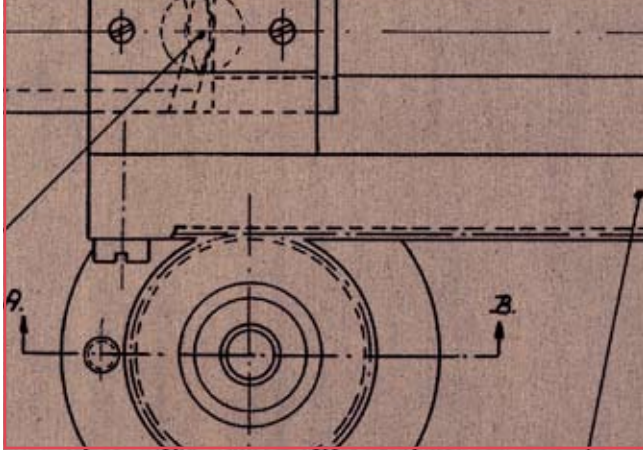
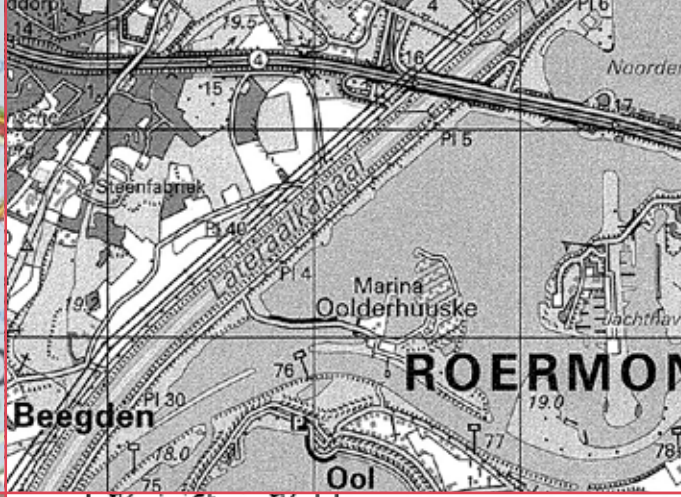
## Océ Image Logic

### Unique image-processing technology



Océ Image Logic is Océ's unique intelligent image-processing technology for easy-to-use 'green button' copying and scanning. It enables any original to be copied or scanned to file at optimum quality, right first time. This simple green button approach saves valuable time and ensures that all information is reproduced correctly, without wasting media by trial and error.





### Green button copying and scanning

Océ Image Logic enhances scans using three digital technologies for outstanding copies every time:

- Automatic Background Compensation suppresses undesired backgrounds, producing clean copies even from old and dirty originals
- Advanced filtering enhances weak lines and balances halftones. Weak information is digitally enhanced, and shaded areas are identified, smoothed and softened without loss of information.
- Error diffusion ensures solid fills, faithfully reproduced lines and perfect halftones, and reproduces screened originals without disturbing moiré patterns

These capabilities make Océ Image Logic the leading technology for productive 'green button' copying and scanning. Every document is scanned perfectly every time, ensuring high-quality copying and reliable archiving with maximum information retention.

### Handling special originals

The Océ TDS800's 400x400 dpi scanner allows direct selection of different original types:

- Lines and text: default mode for technical documents
- Photo: optimal grey scale translation and reproduction
- Greys and lines: fine information is retained while area fills are smoothed into soft images; ideal for reproducing maps
- Printed matter: fine grids in illustrations and photographs on printed matter are reproduced without moiré artefacts
- Dark originals: line and text information in dark and low-contrast originals such as diazo intermediates is enhanced and reproduced clearly
- Blueprints: in this mode black is printed as white and white is printed as black, significantly enhancing legibility
- Cut & paste: tape marks of cut & paste collages are filtered away to a clean copy

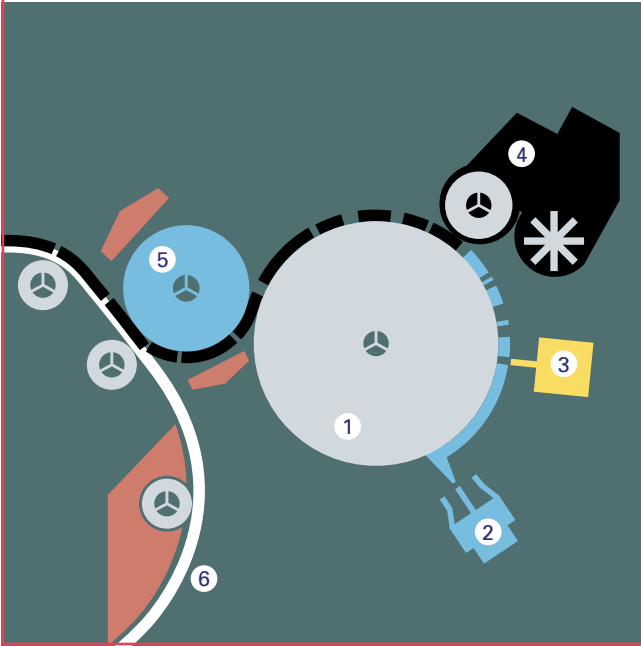
Océ Image Logic has automatic halftoning, thresholding, sharpness and density in all original modes, so copies and scans are right first time without trial and error.

## Océ Copy Press

### Unique offset-like printing technology



Océ Copy Press technology with Direct Dot Positioning ensures consistently high printing quality, even after hundreds of thousands of prints. It replaces the conventional electro-photographic technology, which has long been a barrier to improvement of print quality and reliability. An offset-like principle takes the print image to the paper, and not the other way round. In the Océ TDS800 Pro Series the proven quality of this technology goes one step further. Improvements in the toner unit ensure solid black areas are printed consistently over time. The result is uniform, intense solid areas, well differentiated grey scales and high sharpness of even the finest lines. Quality is further enhanced by the ultra-fine, carrier-free monocomponent toner.



The unique Océ Copy Press technology actually presses the image onto the media, for consistently high quality

1. Organic photoconductor (OPC drum)
2. Corona unit
3. LED printhead
4. Monocomponent toner
5. Compact transfer fuse unit (CTF)
6. Simple media path along pre-heater

## Six components of unique Océ Copy Press technology

### 1 Organic photoconductor (OPC drum)

The heart of the Copy Press system is Océ's unique organic photoconductor (OPC), an extremely light-sensitive and durable OPC drum which guarantees high quality.

### 2 Corona unit

As it revolves, the OPC drum is charged by a pin-array corona unit. Its ozone emission has been brought down to close to zero. Resistant to pollution, it ensures a virtually constant charge level over time.

### 3 LED printhead

A single element LED (Light Emitting Diode) printhead projects the image onto the OPC drum, producing a very sharp and accurate latent image, even of the finest lines.

### 4 Monocomponent toner

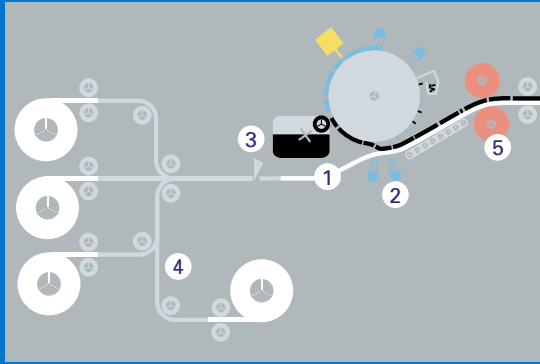
The latent image is developed by direct transfer of Océ's unique monocomponent toner. This results in extremely precise transfer and eliminates waste toner. Moreover, flying toner particles are virtually eliminated, adding to a healthy working environment.

### 5 Compact transfer fuse unit (CTF)

Océ's compact toner transfer fuse unit (CTF) allows for Direct Dot Positioning. It conveys the toner image from the OPC onto the paper, closely resembling offset printing. This process prevents contact between the media and the photoconductor, eliminating the risk of damage to the photoconductor. Direct application of the toner via the CTF unit ensures 100 percent toner transfer, further contributing to image quality and minimising the risk of toner pollution.

### 6 Simple paper path along pre-heater

Since the print image is brought to the paper and not the other way round, the paper path is simple and reliable -- so simple that jams are virtually eliminated. The paper is pre-warmed, allowing low fusing temperatures and preventing the media from warping or wrinkling.



1. Paper path
2. Corona units
3. Paper cutter
4. Less sturdy materials
5. Fuse unit
6. Photoconductor

## Productivity that's incomparable

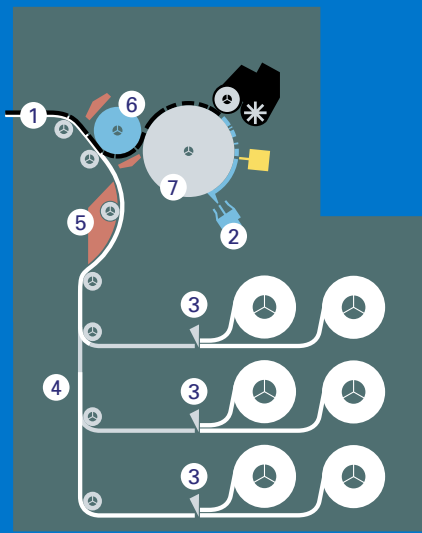
This table shows a comparison between Océ Copy Press technology and conventional electro-photographic technology in the key areas of sensitivity to internal paper jams, copy and print quality and environmental issues.

### Conventional electro-photographic technology

#### Sensitivity to internal paper jams

Issue	Problem	Disadvantage
<b>1. Paper path</b>	Long paper path: through the middle of the machine to the sensitive photoconductor and fusing area	Complex internal mechanism results in many potential jam areas and wasted paper
<b>2. Corona units</b>	3-8 wire corona units: several charges are required to make a copy	Charges generate excessive static electricity increasing chance of jams
<b>3. Paper cutters</b>	1 paper cutter is used to cut all different media rolls	Rewinding of roll needed when different media sizes are used within a set, increasing chance of jams and reducing printing speed
<b>4. Material use</b>	Less sturdy uncoated materials often used, including paper path guides (some machines weigh around 400 kg)	Less durable parts may result in more frequent paper jams and required service visits
<b>5. Sensitivity to humidity</b>	Paper at room temperature passes through high-temperature process, past flat plating	Paper can stick to condensation on flat plating, leading to paper jams



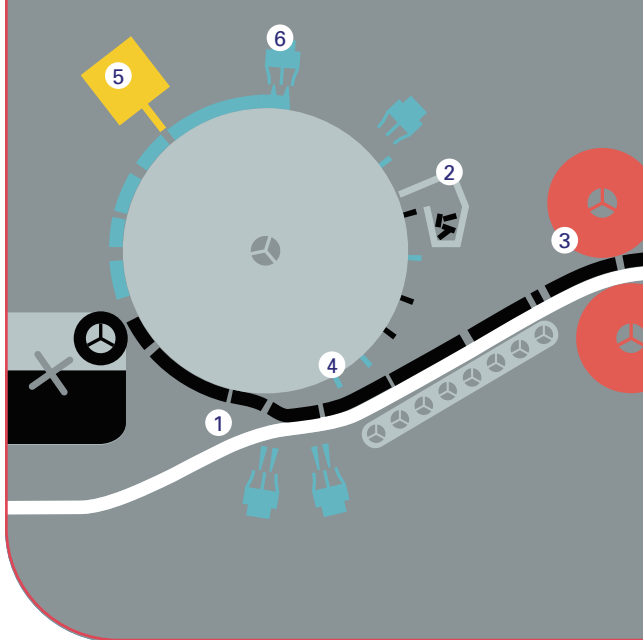


1. Paper path
2. Corona unit
3. Paper cutters
4. Robust materials
5. Pre-heater
6. Compact transfer fuse unit
7. Photoconductor

## Océ TDS800 breakthrough Copy Press technology

### Sensitivity to internal paper jams

Issue	Solution	Advantage
<b>1. Paper path</b>	Short, simple paper path: does not pass sensitive parts; the image is brought to the paper	No internal jams in photoconductor area because images go past it instead of through it
<b>2. Corona units</b>	Only 1 electrical charge is needed because of the highly efficient imaging system	Virtually no static electricity and reduced chance of paper jams
<b>3. Paper cutters</b>	3 cutters; all 6 rolls are positioned for immediate cutting	No time-consuming rewinding of rolls needed, resulting in less jams and higher productivity
<b>4. Material use</b>	Robust coated metal plating and durable materials are used throughout the machine (machine weighs 939 kg)	Constant reliability over years of intensive use
<b>5. Sensitivity to humidity</b>	Paper is pre-heated before fusing and led via ribbed, coated plating	Virtually no jams because temperature differences and surfaces between paper and contact points are limited



1. Toner transfer
2. Toner unit with developer
3. Fuse unit
4. Photoconductor
5. LED printhead
6. Corona units

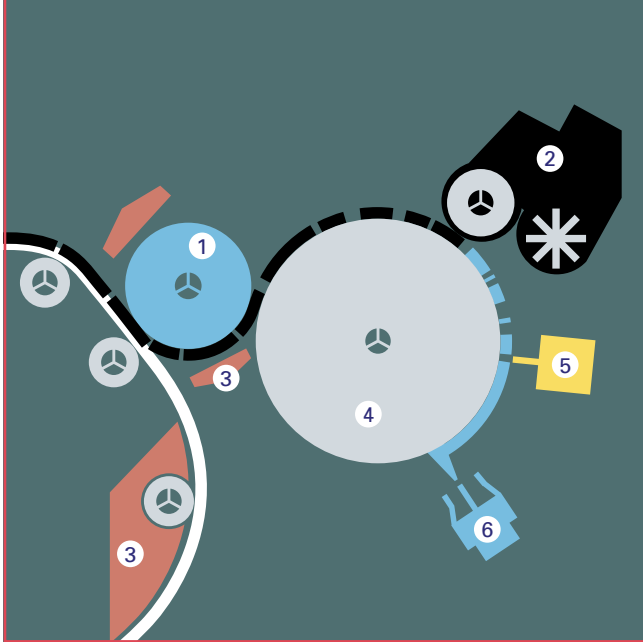
## Conventional electro-photographic technology

### Copy and print quality

Issue	Problem	Disadvantage
<b>1. Electrical toner transfer</b>	Toner has to “jump” from photoconductor to paper	Spotted, soiled prints and need for frequent cleaning of wire corona unit because of floating toner particles
<b>2. Toner recycling</b>	Toner recycling used for toner efficiency. Developer loses ability to hold a charge	Print quality deteriorates as the wrong amount of toner particles is being transferred
<b>3. Toner fusing temperature</b>	High-temperature toner fusing; toner melts onto surface of media	Incomplete toner transfer on some films; humid paper results in loss of information and soiling of prints by floating toner; media may warp or wrinkle
<b>4. Photo-conductor location</b>	Paper travels to the photoconductor	Scratches or damage to the photoconductor from clearing paper jams show up as unwanted marks on prints
<b>5. Staggered printhead</b>	Calibration needed between the multiple staggered small-format printheads to create a large format latent image	Miscalibration of the multiple printheads results in inaccuracies and wrong positioning of information

### Environmental issues

Issue	Problem	
<b>3. Toner fusing temperature</b>	High-temperature toner fusing (around 180°C)	Operating environment warms up
<b>6. Ozone emissions</b>	3-8 wire corona units: several charges create ozone	Relatively high ozone emissions (up to 0.05 ppm) increasing risk of “Sick Building Syndrome”



1. Compact transfer fuse unit
2. Monocomponent toner unit
3. Pre-heaters
4. Photoconductor
5. LED printhead
6. Corona unit

## Océ TDS800 breakthrough Copy Press technology

### Copy and print quality

Issue	Solution	Advantage
<b>1. Electrical toner transfer</b>	Surface-to-surface transfer: no electrical charge is required for toner transfer because toner is pressed directly into the paper (offset-like)	Eliminates floating toner particles, toner spots and soiled prints and ensures that every dot of information is directly placed in the right position
<b>2. Toner recycling</b>	Unique monocomponent toner system works without developer and without toner recycling	Consistently high-quality prints and no developer to replace
<b>3. Toner fusing temperature</b>	Offset-like image transfer with low temperature: toner and media pre-heating ensure 100% toner transfer without media distortion or humidity problems	High-quality prints: no loss of information, minimal risk of toner contamination in the machine and smooth media
<b>4. Photo-conductor location</b>	Paper never comes into contact with the photoconductor; operator cannot access the photoconductor	Crisp, clean prints with little chance of damage to photoconductor
<b>5. Staggered printhead</b>	Single element LED printhead. Water-cooled for optimal stability. Fixed in steel frame	No need for callibration over the lifetime of the system. Straight, uninterrupted lines and complete information on every print

### Environmental issues

Issue	Solution	Advantage
<b>3. Toner fusing temperature</b>	Paper pre-heating, effective insulation and low fusing temperature (around 100°C); EPA Energy Star® compliant	Operating environments remains pleasant to work in
<b>6. Ozone emissions</b>	Only 1 pin-array corona unit with internal air circulation	Virtually no ozone emissions (<0.0008 ppm at peak production) ensuring a healthy work environment

# Beyond the Ordinary

Océ helps the people who make our world. Companies everywhere use Océ technical documentation systems in manufacturing, architecture, engineering and construction. Each week, high speed Océ printing systems produce millions of transaction documents such as bank statements and utility bills. And in offices around the world, people use Océ professional document systems to keep the wheels of business and government turning. Océ is also at work in publishing on demand, newspaper production, document management outsourcing and wide format colour for spectacular display graphics. It all helps our professional customers go 'Beyond the Ordinary' in printing and document management.

Building a sustainable business has always been one of our core business principles. We do this by developing products and services that add value to the document processes of our customers, while minimizing environmental impact. And we conduct our business activities in a socially responsible manner aimed at preventing health, safety and environmental risks.

For information and services, visit us at:

[www.oce.com](http://www.oce.com)

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Printing for Professionals

