
# Why Kodak CTP is the preferred choice for **PROCESS-FREE PLATES**


During the 1995 drupa, the print industry's largest exhibition, when majority of prepress vendors concentrated on visible light imaging technologies, Kodak and Creo presented a novel thermal technology for imaging printing plates. Now, thermal imaging technology is used in more than 80% of CTP devices worldwide, confirming this advancement has changed the industry's future.

In the 30 years since, Kodak has stayed on the leading edge of thermal imaging technology for CTP and plates and now provides the most sustainable and stable plate making process available on the market. Kodak's CTP devices deliver:

- Product design and performance that is optimized for sustainability and current and future technology, including process-free plates.
- Optimized technology, including significantly reduced power consumption, no ablation while imaging, and CTP automation with appropriate plate and paper handling.
- Unique SQUARESPOT Imaging Technology, which continues to show differentiated benefits for applications where imaging spot size and shape matter.

Before getting into more details about these technical features, it is important to keep in mind what an offset printer expects from an optimal prepress setup:

- Lowest cost of operation all the way to the press
- Highest uptime with minimal operator involvement
- Minimization of the environmental burden on the world around us

We believe we can do all of this with key technologies invented and owned by Kodak.

**CTP DEVICES DESIGNED FOR TODAY'S REQUIREMENTS – OPTIMIZATION AND REDESIGN**

CTP compatibility with process free plate technology is essential in order to realize the full potential offered by this new type of plate. All Kodak's CTP devices – ACHIEVE, TRENDSETTER, GENERATION NEWS and MAGNUS Platesetters – are 100% compatible with KODAK SONORA Process Free Plates, enabling the complete elimination of plate processing equipment and chemistry, as well as the associated operational variables and costs.

Here are some key technology features that have been designed with the requirements of process free plates in mind:

- **Optimized laser power:**

SQUARESPOT Thermal Heads have a very efficient optical system from laser to plate, which results in more stable plate making and less wasted energy. Using a 50-watt laser, with about 50% efficiency, conveys about 25 watts on plate. Competitive systems are less efficient and, as a result, waste more energy, which turns into heat. This heat then requires cooling/chilling, which requires more power. Think about your old 60-watt light bulb versus LED at 9 watts; which wastes less energy?


- **The latest plate and paper handling technology for CTP automation:**

Process free plates can be more scratch sensitive and/or light sensitive. MPL automation options for the MAGNUS Platesetters, and SCU and MCU automation options for ACHIEVE and TRENDSETTER Platesetters employ technologies that have been specifically designed to take these requirements into account. Examples include:

- Removing paper reliably, with no movement between paper and emulsion on plate;
- Light tightness of the CTP panels, ensuring no special prepress rooms are required while storing plates inside the platesetter cassettes for longer durations;
- Scratch-free picking, transporting and imaging of plates, regardless of plate technology.

Today's CTP devices also need to be optimized to perform well when imaging process free plates; what was acceptable only a few years ago may no longer be acceptable with today's plates. Kodak CTP devices have continued to evolve in ways that best integrate newer, more eco-friendly solutions, and reach their full sustainability potential.

Unlike some simple-process and other process free plates, SONORA Plates do not produce debris while imaging. There is no need for a debris removal mechanism. Printers benefit from savings in power consumption (1.0 kW), space, and noise in the prepress room.

By optimizing laser cooling systems, automation, and CTP engine technology, power consumption is reduced by up to 95% compared to competitive devices. For example, TRENDSETTER Platesetters do not require a vacuum system to hold the plate on the drum due to the low drum speed enabled by the wider imaging swath of the SQUARESPOT Thermal Head. The table below illustrates Kodak's ongoing commitment to minimizing the energy consumption of its CTP devices.

## KODAK CTPs use less power by design:

- State-of-the-art electronics
- Custom-designed power distribution system
- Low-current draw drum drive system
- High-efficiency imaging system
- High-efficiency cooling system
- Optimized mechanical assemblies

| | POWER CONSUMPTION WHILE IMAGING (WATTS)* | | | | |
|---|---|---|---|---|---|
| | **Current Model** | **Competitor A**** | **Competitor B**** | **Competitor C**** | **Competitor D**** |
| KODAK ACHIEVE T400 Platesetter | **380** | 4,970<br>**92% savings** | 4,600<br>**92% savings** | 700<br>**46% savings** | 5,300<br>**93% savings** |
| KODAK ACHIEVE T800 Platesetter | **380** | 4,970<br>**92% savings** | 4,000<br>**91% savings** | 3,000<br>**74% savings** | 5,600<br>**93% savings** |
| KODAK TRENDSETTER Q400 Platesetter (F/X-Speed) | **770** | 4,980<br>**85% savings** | 4,600<br>**92% savings** | 3,000<br>**74% savings** | 5,300<br>**85% savings** |
| KODAK TRENDSETTER Q800 Platesetter (F/X-Speed) | **770** | 4,980<br>**85% savings** | 3,900<br>**80% savings** | 3,000<br>**74% savings** | 5,600<br>**86% savings** |

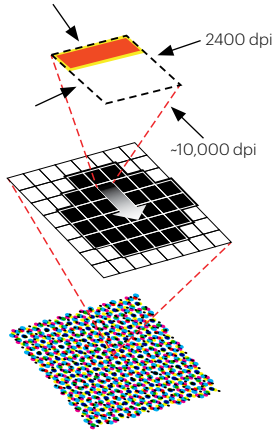
*Based on public information.
**Competitive devices are those that are comparable in terms of specifications and features.

## SIZE (AND SHAPE) MATTER - SQUARESPOT IMAGING TECHNOLOGY TODAY...

Many have tried unsuccessfully to match what SQUARESPOT Imaging Technology has done for 30 years. As plates move to process-free technology, the unique benefits of SQUARESPOT Technology become even more important. The small size of a single pixel and the evenness of the energy level across the imaged pixel delivered by SQUARESPOT Imaging Technology are key to unlocking the full potential of process-free plates.

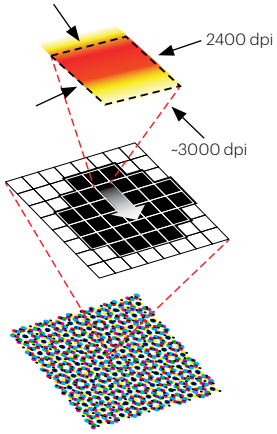
### Kodak Imaging Technology

**SQUARESPOT**
Technology




Thermal
Tonal stability – HIGH
Exposure uniformity – HIGH

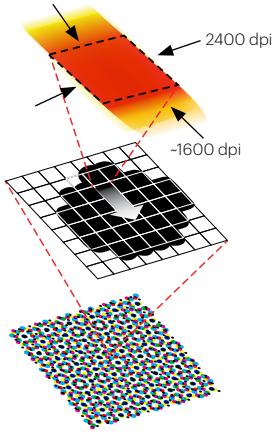
**TH5**
Technology




Thermal
Tonal stability – MED to HIGH
Exposure uniformity – HIGH

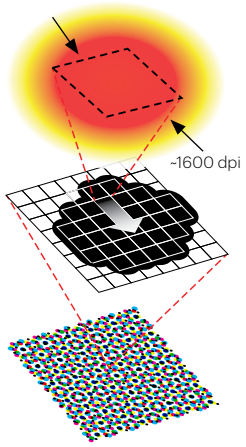
### 3rd Party Imaging Technology

**GLV**
Technology




Thermal
Tonal stability – MED
Exposure uniformity – LOW

**GAUSSIAN**
Technology




Violet, Thermal, CtCP
Tonal stability – LOW
Exposure uniformity – LOW

Extensive testing and years of customer experience have solidified key benefits:

- **Increased laser efficiency:** Higher plate throughput and up to 35% less energy is consumed relative to competing systems
- **Plug-and-play color reproduction:** No dot gain calibration required when switching from processed plates
- **Superior tonal stability:** Highest screening qualification with the same process free plate
- **Stronger imaging contrast:** compared to other imaging technologies when exposed to the same exposure energy level, due to the high and even power density of the SQUARESPOT imaging head.

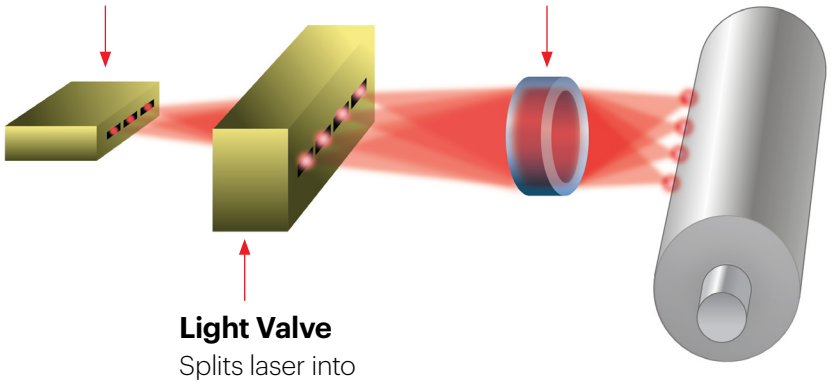
# SQUARESPOT Technology and SONORA Process Free Plates: the perfect combination

Of course, the key benefits that set SQUARESPOT Technology apart still apply:

- Maximum uptime with Geometric Correction, enabling plate remakes on any other CTP device with SQUARESPOT Technology
- Operational flexibility with perfect dot-to-dot registration between CTP devices, enabling Stable, reliable performance with the widest available operational temperature range in the industry,– from 18-30 degrees C (64-86 degrees F)
- Maximum quality and robustness with Dynamic Autofocus, creating market-leading specifications with Staccato 10 FM and 450 lpi AM screening Kodak's award-winning, superior imaging technology provides accurate, stable and reliable dots with wide latitude under varying conditions.

**IR Laser Diode**
Redundant lasers mix to illuminate light value.

**Dynamic Autofocus**
Lens dynamically adjusts focus as drum rotates, protecting against hot spots and enabling consistent imaging, even with plate process variation.



**Light Valve**
Splits laser into 240 pixels

**Temperature Compensation**
Automatic scaling for plate expansion makes registration accurate on every plate, on any device, ensuring plate remake consistency.

**Geometric Correction**
This feature corrects asymmetries and aligns the imaging grid to the plate edge, ensuring fit between other devices with SQUARESPOT Imaging Technology.

## COMMITMENT TO SUSTAINABILITY

Sustainability has always been—and continues to be— fundamental to Kodak's product development efforts, and we continue to invest in minimizing the environmental footprint of our CTP technology, including

- Kodak CTPs deliver up to 93% energy savings over alternative platforms reduced heat output of the CTP device, reducing the prepress environment conditioning
- Recycling strategy for used and aging CTP devices with a responsible recycling program for obsolete platesetters, or Kodak's Certified Pre-Owned CTP Device program, which extends the life of the device.
- Reduced packaging waste with bulk packaging of plates, including Multiple Pallet Load automation options for MAGNUS Q800 and MAGNUS Q3600 Titan Platesetters, which further reduce packaging and operational requirements.

SONORA Process Free Plates go a long way toward reducing environmental and economic costs for printing customers, and those benefits are multiplied when SONORA Plates are paired with Kodak's CTP technology. The environmental and performance attributes of Kodak's CTP devices perfectly complement the sustainability advantages available with SONORA Plates, which eliminate plate making steps, as well as processing equipment, chemistry, power, space and variability in the plate making process... with no compromise to on-press performance.

## ABOUT KODAK

Eastman Kodak Company is driving innovation and change for customers in commercial, packaging and functional printing, and enterprise services markets with one of the broadest portfolios of technologies, products, and services in the graphic communications and commercial printing markets. Solutions from Kodak offer exceptional quality, streamlined production, and scalability to grow with our customers' businesses, and only Kodak provides digital and conventional solutions within a unified workflow. We are a worldwide team that performs with excellence, works with customers to help them succeed, and brings innovative solutions to market.

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