

Green Printing Starts with the Screen

How MultiDot Technology Combines Cost Efficiency with Environmental Responsibility

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“Being eco-friendly” in printing often stops at having an FSC certificate on the cover and using recycled paper. Rarely does it go deeper—into the process, the machine, or the very structure of the print itself. MultiDot Save is a technology that shows real sustainability starts at the halftone dot level—and that you can be both greener and more profitable at the same time.

Printing and the Environment: How Many Footprints Are There Really?

Offset printing is a complex process that generates several streams of materials and emissions:

- Inks – contain solvents, pigments, and additives
- Water – used in the offset printing process
- Powder – applied to sheets to prevent sticking during drying
- Energy – needed for drying, ventilation, and machine operation
- Waste paper (makeready waste) – generated during setup

Each of these elements represents both a cost for the print shop and a burden on the environment. **MultiDot Save reduces all of them—simultaneously.**

Five Areas Where MultiDot Reduces Environmental Footprint

1. Less Ink

Less ink is not just about cost only—it means fewer pigments, binders, and chemicals entering the environment via wastewater and emissions. **Around 15% savings*** may not sound revolutionary, but multiplied across millions of sheets annually, it becomes significant.

2. Less Powder

In conventional offset printing, powder (anti-setoff spray) is a fine dust applied to freshly printed sheets to prevent them from sticking together.

The less ink on the sheet, the less powder is needed.

Result: less dust in the facility, lower emissions—and lower cost.

3. Less Water

Offset printing requires water (fountain solution) to dampen non-printing areas of the plate. MultiDot technology significantly reduces its consumption thanks to improved process stability, which minimizes frequent adjustments and helps maintain optimal water–ink balance—especially when less ink is used.

4. Less Energy

Drying time directly impacts energy consumption. Less ink means faster drying and lower energy use for ventilation and curing.

Fewer interruptions between operations also increase machine efficiency without increasing runtime.

5. Less Waste Paper

Makeready is the phase where the press is adjusted before production. It generates a significant amount of paper waste. That’s normal.

MultiDot shortens makeready time because the process stabilizes faster—resulting in less waste.

Environmental Impact Summary

Parameter	Effect with MultiDot Save	Environmental Impact
Ink consumption	–15%*	Fewer pigments and chemicals
Powder use	Reduced proportionally to ink	Less dust, lower emissions
Water use	Reduced	Less industrial wastewater
Energy use	Shorter drying time	Lower carbon footprint
Waste paper	Shorter makeready	Less paper waste

Sustainability Is Now a Business Foundation

Sustainability is no longer optional in printing. More and more customers—especially consumer goods manufacturers and publicly listed companies—require actual environmental data from suppliers:

- energy consumption
- water usage
- CO₂ emissions
- recyclability

For print shops using MultiDot, the arguments are clear and measurable:

- ~15%* less ink consumption
- noticeably shorter makeready
- lower water and energy usage
- reduced CO₂ emissions

These are not claims—they are measurable data that can be included in ESG reports. And that has become a key competitive advantage.

“Ecology was one of the main drivers behind the development of MultiDot technology by Heidelberg Polska.”

ESG in Printing: Where Is the Industry Today?

Major paper producers have already set ambitious goals:

- **Metsä Board** – aims for 100% fossil-free energy by 2030
- **Stora Enso** – carbon neutrality by 2050 and full recyclability by 2030
- **Arctic Paper** – among the lowest water usage in the industry (3–5 liters per kg of paper)

Print shops that want to partner with such companies must also be truly sustainable—not just in declarations. **MultiDot Save provides a real tool to achieve this.**

Digital vs Offset Printing – A Misguided Debate

It is often argued that digital printing is more eco-friendly because it requires no plates or makeready. This is true for short runs.

However, for longer runs, **offset remains more efficient in terms of energy, materials, and cost.** The issue lies in makeready waste and high ink usage.

MultiDot Save changes this equation by reducing both makeready time and ink consumption—without requiring new equipment investments.

How Can a Print Shop Communicate This to Customers?

Technology alone is not enough—it must also be effectively communicated:

- **MultiDot Print Certificate:** Label on packaging: “Printed using MultiDot technology – less ink, less waste”
- **Customer ESG Reports:** Data comparison vs. standard offset
- **Comparison Samples:** Standard vs. MultiDot print side by side
- **Website Content:** Dedicated “Our Sustainability” section with real data

Summary

- **MultiDot Save reduces ink consumption by approx. 15%***, which also reduces powder, water, energy, and waste
- **Four main environmental impact areas:** ink, water, energy, waste
- **Shorter makeready = less paper waste**
- **Definite ESG data is now a competitive advantage**
- **Being an eco-friendly print shop does not have to cost more**—MultiDot improves profitability and quality simultaneously
- **The paper industry is setting targets for 2030–2050**—print shops must keep up

MultiDot Save is available for print shops using Heidelberg Prinect systems. For implementation details, contact Andrzej Kunstetter or Tomasz Jasiński, Heidelberg Polska.

**Savings depend on job content and may exceed 40% in specific cases; 15% is the lower end of the safe range based on actual production data from MultiDot users.*