The Paradox of Print



Larger sheets. Shorter runs. Faster turnaround. Three impossible demands. One elegant answer.

In 2013, I wrote in Corrugated Today about a paradox emerging in the large-format and corrugated markets: jobs were getting bigger, runs were getting shorter, and turnaround windows were collapsing. It sounded contradictory at the time.

Thirteen years later, it hasn't disappeared. It has intensified.

Digital printing matured. Durst, EFI/Nozomi, Agfa, and HP push the limits of speed, size, and short-run flexibility every year. But while print speeds doubled, cutting speeds didn't. The cutting side of the workflow has become the critical bottleneck — and the constraint on every converter's growth.

What we hear every week from shops running wide-format digital presses: **"We can print it. We can't cut it fast enough."**

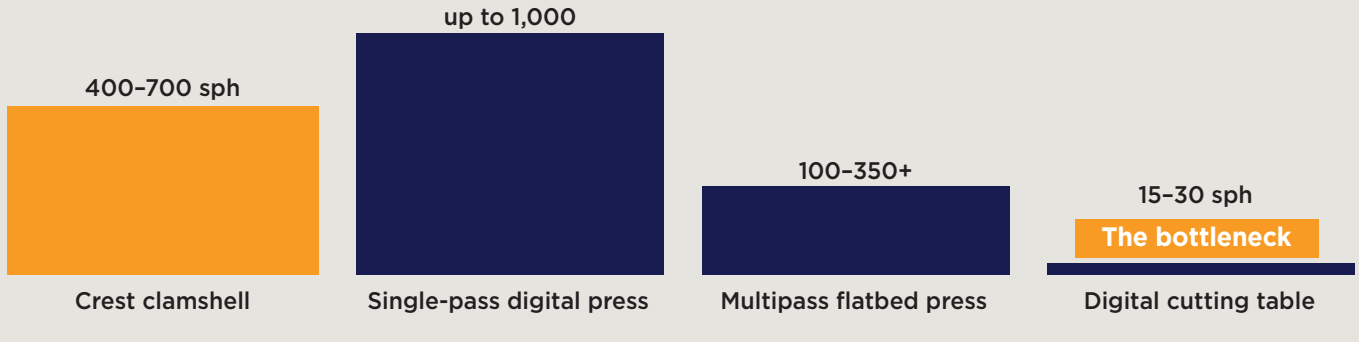
We cut what you print.

Today's flatbeds run 100 to 350+ boards an hour. Single-pass runs 1,000. Your digital cutting table runs 15 to 30. Crest runs 400, and up to 700.

13X At 400 sph, one Crest out-cuts a digital table better than 13 to 1. At 700, better than 23 to 1. And the Crest cuts every part, every score, every crease in one impression — its cycle time doesn't grow with the complexity of the sheet.

400	350+	1,000	15–30
Crest sph, conservative. Capable of 700.	Multipass flatbed, boards per hour	Single-pass digital press, boards per hour	Digital cutting table, sheets per hour

Sheets per Hour — Head to Head



*400 sph is a conservative baseline; Crest presses are capable of up to 700 sph depending on model and application. The 13× comparison is drawn against 30 sph — the fastest end of the digital table range, not the slowest. Press output is published in square meters per hour, so sheets-per-hour figures are derived and vary with sheet size and quality mode. Digital table output varies with cut-path length per sheet; 15–30 reflects typical display and POP work.

Print Big. Cut Smart. Deliver Fast. That's the workflow. The cut is where the money is made — or lost.

DIE CUTTING ADVISORS

What We Wrote in 2012 and 2013.

What's true today — and what the market looks like now.

Corrugated Today — **May/June 2012** — published *"Rebirth of the Clamshell."* At the time, large-format printing wasn't its own industry. It was a capability inside multiple sectors — corrugated sheet plants, screen printers, large-format litho houses, traditional commercial printers — each handling large-format work as part of a broader print business. All of those operators came up through the print trades, with analog die cutting already in the toolkit of the shop.



Corrugated Today — **January/February 2013** — followed with *"Corrugated Paradox: Large Format, Short Run."* Digital print would explode. Runs would shrink. Finishing would become the constraint. All of it held.



The deeper shift — one neither article fully predicted — is what happened to the work itself. Large-format and digital printing have consolidated into their own industry. No longer a capability inside corrugated, screen, litho, or traditional commercial operations — but a standalone sector with its own economics, its own equipment, and its own kind of operator.

Many shops are still led by men and women who came up through apprenticeship and the print schools — some served those apprenticeships decades ago, others are serving them now. Alongside them is a new breed of owner: people who came to the industry from different paths — sales, marketing, entrepreneurship — rather than traditional print apprenticeship. They bought a digital printer, a digital cutter, and built a business on the strength of their commercial skills. Both paths produce real companies. **Both face the same wall.**

Digital cutting tables run 15–30 sheets per hour. Presses now run three to thirty times that. Once volumes push past what a digital cutter can keep up with, a shop has to bridge to analog die cutting — a discipline some operators have known their entire careers, and one others have never run.

That's where Die Cutting Advisors comes in. For shops with deep analog roots, we bring the most advanced clamshell technology on the market. For shops bridging in from digital, we bring the operator training, application support, and partnership network — Mathias Die, the National Steel Rule Tech Lab — that turn equipment into a working production line.

2012

"The clamshell remains the most efficient and profitable short-run solution for today's sheet plant."

2013

"The plotter cuts between 15 and 30 sheets per hour. The digital press runs at 180."

Today

Large-format digital is its own industry. Print speeds have doubled. Digital cutters still run 15–30/hour. The shops that bridge to analog scale. The ones that can't, plateau.

When I said the clamshell was being reborn, I meant it. In the 13 years since, Crest has become the answer the industry didn't know it needed — for veteran print shops and digital-first entrants alike.

Originally published in Corrugated Today, May/June 2012 and January/February 2013. Articles authored by Robert Weidhaas, Jr.

Crest Is What I Was Writing About

The clamshell, evolved. Engineered to resolve the paradox.

Everything Die Cutting Advisors does today exists to solve one problem: **the cut has to be as fast as the print.**

The No More Make-Ready engineering on small and medium Crest models. The Soft Cut™ pad system co-developed with Dicar and Rick Putch at National Steel Rule. Our production-grade installations at Mathias Die and the NSR Tech Lab.

And the Widemouth™ technology — the only patented technology of its kind in the industry — that opens the press to substrates no other clamshell can run. Plus the operator training, application support, and partnership network that turn equipment into a working production line. All of it points to the same answer.

Crest clamshell presses cut entire sheets in a single impression. Every part, every score, every crease — done. Up to 60% faster than digital cutting tables for production runs. With Widemouth™, they handle 1″-thick foamboards, Falconboard®, Xanita Board®, and Gilman® Eagle Cell® and Display Board — materials that used to force the job onto a digital table or out the door.



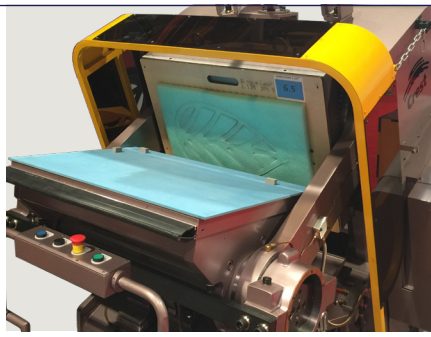


The paradox isn't a problem to manage. It's the market opportunity of the next decade — for shops that can print big, cut smart, and deliver fast.

Crest has been manufactured since 2000. For the last thirteen years it has been the answer to the exact problem those articles described.

Turn the page to see how →

Soft Cut™ System



One knife, one pad, one setting. Zero make-ready.

US Patents 10,864,650; 11,584,035; 11,904,493

Soft Cut replaces the clamshell's traditional metal cutting plate with a serrated knife that cuts into a urethane pad. The pad hardness is matched to the knife profile to effectively die cut a given substrate — with zero make-ready.

Developed in partnership with Dicar Inc. and Rick Putch of National Steel Rule, Soft Cut delivers edge quality similar to digital table cutters at mass production speed.

- Runs serrated tooling with Soft Cut™ and traditional flat steel rule knife on the same press
- Up to 60% faster than digital cutting tables for production runs
- Cuts rigid plastics such as styrene without heat

What Soft Cut Does

- Eliminates make-ready entirely on compatible applications
- Die cuts rigid plastics in sequence with no adjustments in **up to 80% of all jobs,** in our installations
- Provides edge quality comparable to die cutting with heat — even though cut cold
- Die cuts substrates previously considered impossible: foamboards, honeycomb, reboard
- Cuts rigid plastics such as styrene without heating the cutting die
- Thin soft-cut pads die cut up to 1″ thick Falconboard®, foamboard, and other materials
- Repositionable magnetic pads for fast setup

How to Use

- Remove cutting plate (and filler plate if applicable)
- Install cutting pads with magnet attached to each pad
- Match color-coded pads to serrated knife
- Works effectively on most existing clamshell presses

Three Soft Cut Pads

Each pad is color-coded and matched to a specific serrated knife profile:

Pad	Hardness	Knife Profile	Typical Applications
Green	Softest	Extremely aggressive serrated	Industrial applications
Blue	Firmer	Aggressive serrated	POP, packaging, corrugated
Orange	Firmest	Light serrated	Packaging, rigid plastics

Soft Cut is available as an add-on for all Crest press sizes. On Widemouth™ models, operators switch between traditional steel-to-steel cutting and Soft Cut without removing filler or cutting plates.

A Size for Every Press Need

Nine press sizes. Three format classes. One platform.

Every Crest clamshell shares the same No More Make-Ready engineering, regardless of size. The right model comes down to sheet size, tonnage, and whether the job calls for Widemouth™ capacity.

9	200+	63"x123"	20+
Press models	Installations worldwide	Max Pres Size	Years typical service life

Model	Mobile Bed (English Inch)	Mobile Bed (Metric MM)	Max Cut (English Inch)	Press Load (Tons)	Die Load (Tons)
Small					
Crest 2026	22.125 x 28.34	561 x 719	20 x 26	350	100
Crest 2332	25.39 x 34.64	644 x 879	23 x 32	350	100
Crest 2841	30 x 43	762 x 1092	28 x 41	380	115
Medium					
Crest 3247	33.85 x 48.42	860 x 1230	32 x 47	450	150
Crest 4056	41 x 57	1041 x 1448	40 x 56	450	150
Crest 4167	42.91 x 68.97	1090 x 1752	41 x 67	450	150
Large					
Crest 2M	63 x 85	1600 x 2160	60 x 82	500	200
Crest 2.5M	63 x 108	1600 x 2743	60 x 105	500	200
Crest 3M	63 x 123	1600 x 3124	60 x 120	500	200
Widemouth™					
Crest 2M Widemouth	63 x 85	1600 x 2160	60 x 82	500	200
Crest 2.5M Widemouth	63 x 108	1600 x 2743	60 x 105	500	200
Crest 3M Widemouth	63 x 123	1600 x 3124	60 x 120	500	200

Soft Cut is available as an add-on for all Crest press sizes. Specifications above reflect standard configurations; consult Die Cutting Advisors to confirm tonnage and throat height for your application.

Advise First. Sell Second.

The press is the easy part.

Any rep can quote you a machine. What determines whether it makes money in your building is everything around it: the right tooling, the right pad, the right operator, and someone who picks up the phone in year three.

Thirty years in die cutting and large-format finishing. The team at Die Cutting Advisors has been writing about this market since before it was a market — and has seen what the wrong press does to a shop's margin.

Patented Technology (Rebirth of the Clamshell). Soft Cut is covered by three US patents (10,864,650; 11,584,035; 11,904,493) and Widemouth by a fourth (10,421,207 B2).

Exclusive North American representative for Crest. When something needs to change on the machine, we're not filing a ticket — we're talking to the people who build it.

A partner network that makes the machine produce. The National Steel Rule Tech Center in Pittsburgh and Mathias Die in Minneapolis–St. Paul for tooling and application development — and for cutting your material before you commit. Operator training. Installation and service support.

Bring us your material.

Not a spec sheet — your actual board, your actual job. Run it on a working Crest at either of our production installations:

National Steel Rule Tech Center — Pittsburgh, PA

Mathias Die — Minneapolis–St. Paul, MN

You'll see the edge, the make-ready, and the speed on your own material, on a press that runs pro-duction every day — not a demo sheet chosen to make the machine look good. And if a Crest isn't the right answer for your application, you'll hear it straight — on the spot.

DIE CUTTING ADVISORS

Exclusive North American representative for Crest.

SCAN ME

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