XSYS

rotec®

core

Adapters



ENGINEERED
FOR YOUR PRESS

THREE WAYS CORE X ENHANCES PERFORMANCE

REDUCED BOUNCE

Minimizes vibration-related print instability and supports smoother operation at high production speeds.

IMPROVED PRINT QUALITY

Promotes consistent ink transfer and stable print results across demanding print applications.

HIGHER PRODUCTIVITY

Supports faster press speeds, improved efficiency and more reliable production performance.

THE NEXT GENERATION OF MACHINE-TUNED PERFORMANCE ADAPTERS

Customized Internal Design

- Engineered carbon architecture to enhance stiffness for reduced vibration sensitivity
- Machine-tuned structural design components chosen to work in unison with the dynamic characteristics of the press
- The perfect balance of stiffness & flexibility to maximize performance for each specific press

Proven rotec® Foundation

- Reliable mounting and handling
- Consistent conductivity for dependable performance
- Built on proven rotec® technology



Protective surface

- Durable polyurethane coating
- Refurbishable surface
- Protected investment

Eco Xtra ring technology

- Patented air distribution system
- Up to 90% lower compressed air demand
- Faster sleeve changes and easier mounting
- Reduced wear for extended lifetime

WHY PERFORMANCE ADAPTERS MATTER

Modern flexographic printing places new demands on every component in the printing unit.

At today's production speeds, the adapter is no longer simply a mechanical interface between mandrel and sleeve. It is now an integral part of the rotating dynamic system that directly influences vibration behavior, contact stability, ink transfer consistency, print quality and overall press productivity.

The rotec® Core X Adapter Family addresses this shift through press- specific engineering. By combining machine-tuned dynamic stability, engineered carbon architecture, balanced internal construction and collaboration with OEM press manufacturers (e. g. Soma, Comexi, W&H) and industry experts, Core X adapters become active performance components within the press system, leading to a more stable, quality-driven printing process.

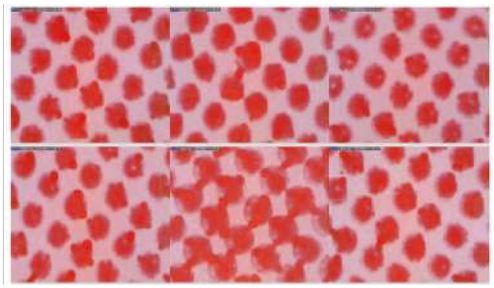
Extensive testing demonstrated that adapter construction has a measurable effect on press performance. Results confirmed that different press platforms benefitted from different engineering approaches, reinforcing the need for machine-specific adapter solutions rather than a one-size-fits-all design.



STABILITY YOU CAN SEE

Quality print performance starts with a stable dynamic system. Dot geometry evaluations demonstrate the impact adapter design can have on print consistency under demanding production conditions. From the example below, the rotec® Core X Ultra Adapter produced nearly 80% better print quality performance and significantly less visual bounce compared to the original, measured by the MS Tremble value for evaluating dot geometry.

rotec® Core X Ultra Adapter – Dot Geometry @ 600 m/min

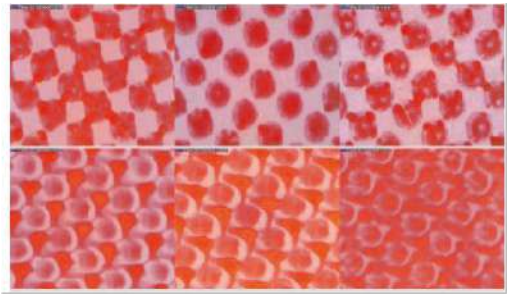


Operator side Center Drive side

Best print area

Worst print area (within bounce mark)

Reference Adapter – Dot Geometry @600 m/min



Operator side Center Drive side

Six magnified dots from a machine-direction printed bar. Greater differences (between top and bottom dots) reflect increased level of bounce. Dot geometry highlights dynamic printing behavior.



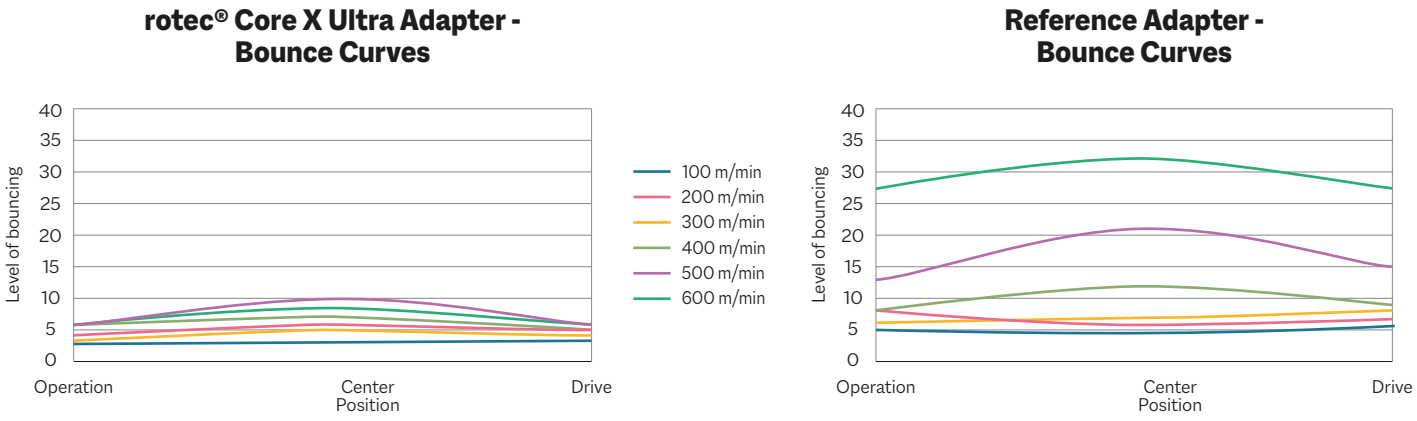
ENGINEERED AROUND PRESS DYNAMICS

The rotec® Core X High Performance Adapter Family was developed through an extensive R&D program involving more than 40 prototype designs, testing at OEM technical centers and customer sites, and in collaboration with industry experts. The objective was not simply to develop another carbon-fiber adapter, but to engineer solutions optimized for the dynamic characteristics of specific press platforms.

MEASURED DYNAMIC STABILITY

The Core X Adapter Series is designed to support stable operation across demanding production speeds by optimizing the press dynamics. Testing showed that machine-tuned adapter designs can significantly influence vibration behavior and print consistency.

From the example below, the rotec® Core X Ultra Adapter produced significantly less bounce, especially at speeds greater than 400 m/min. The overall performance rating for this test showed the rotec® Core X Ultra to be 65-70% better than the reference.



Comparison of dynamic stability behavior under increasing press speeds: Derived from optical density measurements, bounce curves visualize vibration effects on print quality. Lower and flatter curves indicate greater print stability and reduced bounce. Press speeds: 100-600 m/min.

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THE CORE X ADAPTER TIERED CONCEPT

rotec® core X

rotec® Core X

Ultra Adapter Series



Maximum machine-specific performance

Designed for flexographic printers seeking the highest levels of print quality, productivity and performance.

- Press-specific engineered design incorporated with patented and patent-pending technology
- Ultra high-modulus carbon fiber construction for maximum stiffness and stability
- Customized internal architecture tailored to the dynamic characteristics of each press platform
- Advanced vibration control to minimize bounce at demanding production speeds
- Equipped with eco Xtra technology for faster sleeve changes, reduced air consumption and extended product lifetime

Best suited for: demanding high-speed applications where maximum performance and print consistency are critical.

High performance with optimized value

Designed for printers seeking enhanced stability and productivity benefits in a cost-competitive solution.

- High-modulus carbon fiber construction with integrated bounce-reduction design
- Excellent balance of print performance, stability and economic efficiency
- Engineered internal structure developed from the Core X performance concept
- Improved dynamic behavior compared to conventional adapter technologies
- Reliable performance across a wide range of press environments and applications

Best suited for: enhanced performance while maintaining an attractive cost-performance ratio.

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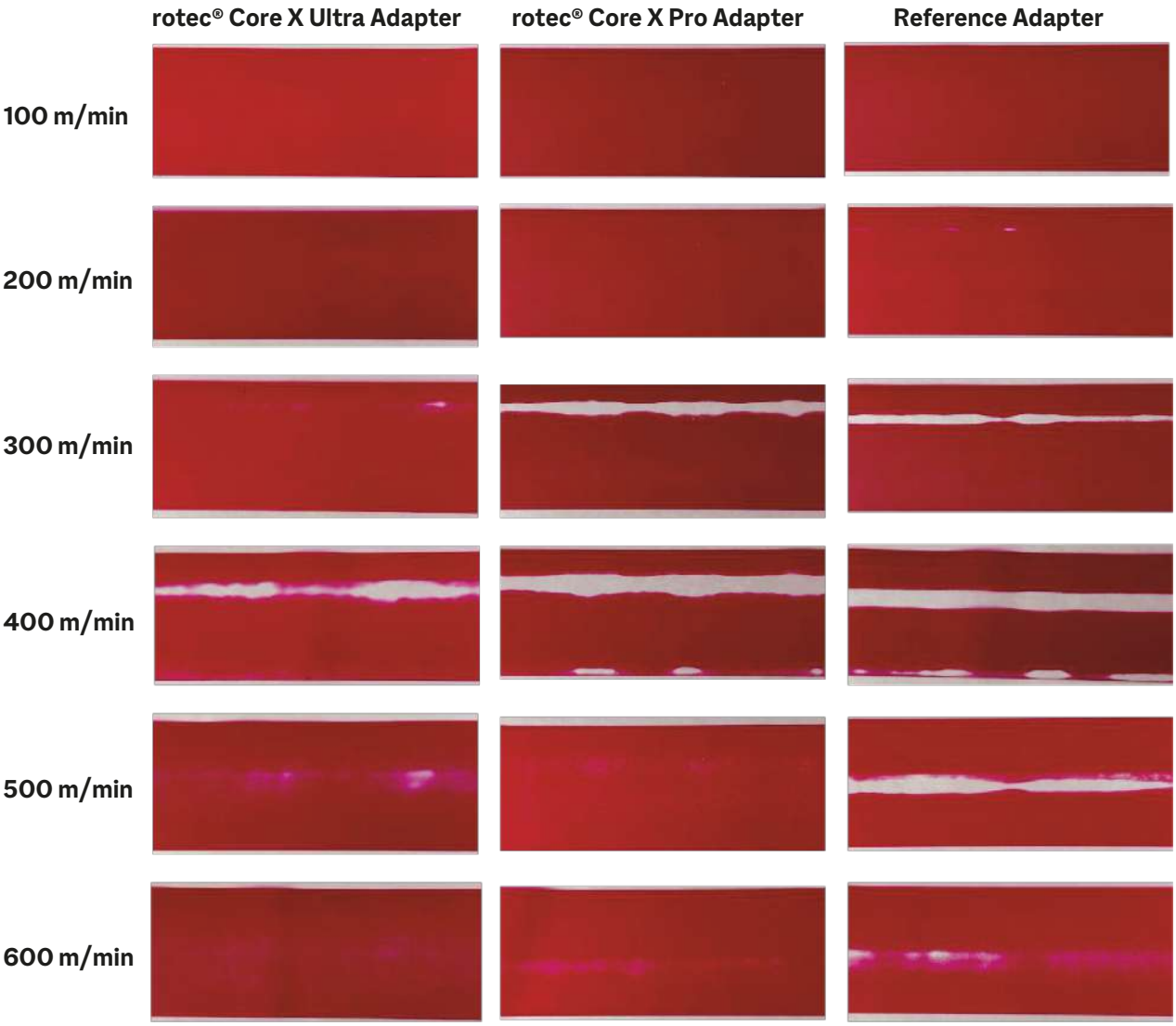
Pro Adapter



PERFORMANCE
UNDER PRESSURE

The evaluation method for the rotec® Core X Adapter development was designed to differentiate adapter performance under demanding print conditions, with a particular focus on bounce behavior and its impact on print quality. The test pattern and press settings intentionally amplified bounce effects, enabling clear differentiation between adapter options at increasing press speeds.

Overall performance ratings from this test showed the rotec® Core X Ultra Adapter to be 35-40% better than the reference and the rotec® Core X Pro to be 25-30% better, compared to the reference.



Solid bar print samples printed with various adapters.
White areas indicate print defects or loss of ink transfer, providing a visual measure of print stability.

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Throughout the development and testing process, one conclusion became increasingly clear: press dynamics matter. The rotec® Core X Adapter Series applies this understanding through machine-specific engineering, resulting in a more stable and predictable printing process. Testing demonstrated that neither the stiffest adapter nor the one with the best bumping properties automatically delivers the best results. The key is finding the optimal balance between all performance-relevant properties.

Martin Shejbal
Independent Flexo Print Consultant

Technical characteristics	rotec® Core X Ultra Adapter Series	rotec® Core X Pro Adapter
Engineered Adapter Solutions	Top Performance Adapters — versions specific to press type	High Performance Adapter
Key Materials	Ultra-High / High Modulus (UHM/HM) carbon with patented eco Xtra technology	High Modulus (HM) carbon with integrated anti-bounce system
Optimal Press Speeds	Tested on speeds up to 800 m/min	
Wall Thickness	From 15.9 mm to 125 mm Additional sizes available upon request	
Tolerances	Outer diameter tolerance + / - 0.02 mm TIR (Total indicated runout) ≤ 0.02 mm (measured on an air cylinder at TIR < 0.005 mm) Face length tolerance according to DIN ISO 2768 1c	
Air supply	Airo: external air source on press gear-side Unifit: standard air source from air cylinder on operator-side	
Proven rotec® construction	Durable & reworkable protective polyurethane surface (Shore D 75) Proven rotec® compressible, conductive base	
Best practices	See rotec® Users Advice for recommended best practices	

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