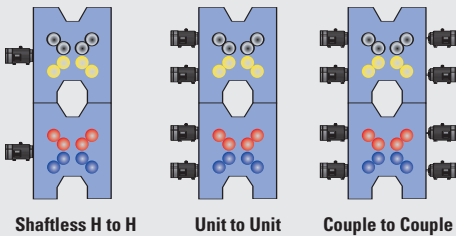
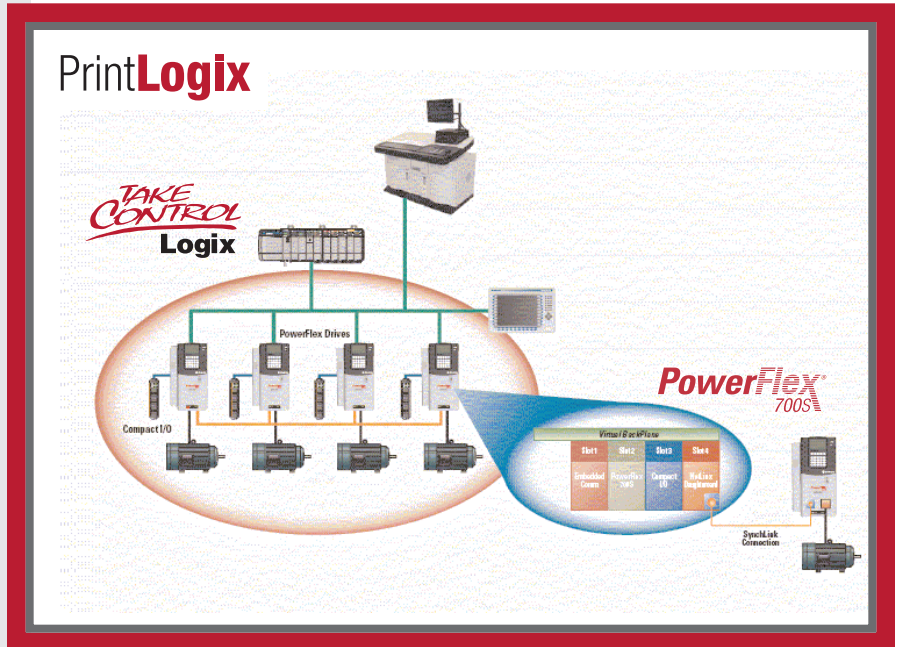


# APPLICATION PROFILE

## PRINTING APPLICATION ELECTRONIC LINE SHAFT SOLUTIONS

Rockwell Automation® has fully integrated the Electronic Line Shaft approach embedding the PowerFlex® 700S AC drive technology into the press control architecture to provide a fast, reliable method of maintaining speed and registration control in the printing environment. Electronic Line Shaft controls from Rockwell Automation can be mounted on or off the press units. This feature offers local and remote diagnostic capabilities that are fully integrated with Rockwell Automation Press Control Systems. The shaftless system replaces many of the mechanical rotation components previously required when transmitting power from the energy source to the point of consumption. It reduces overall machining noise and provides greater flexibility of printing units. Technology can be applied to new presses, new tower additions or retrofits of existing press control systems.



### ADVANTAGES

- Reduced mechanical complexity by eliminating gear boxes
- Simplifies conversions
- Simplifies unit stacking and press reconfiguration
- Split four high operation
- Straight sheet compensators not required
- Shorter setup and make ready times
- Make ready inching motors not required
- Flexibility of unit to folder selection
- Capability of running other supplier's motors with Heidenhain feedback
- Conversion of existing lineshaft presses to shaftless upgrade
- Improves registration and tension accuracy

## PRINTING PRESS CONTROLS FOR THE NEWSPAPER INDUSTRY

## APPLICATION LIBRARY OF KNOWLEDGE

Rockwell Automation has over 100 years of application knowledge and success in the automation business. This product and application knowledge has aligned our products to create the Integrated Architecture story.



## PRINTING APPLICATIONS

Rockwell Automation has over 40 years of experience in printing applications including complete control solutions for the Newspaper, Commercial & Gravure processes. From our first digital DC drive in 1987

to our first digital AC drive system for newspaper in 1991, we have more Newspaper retrofit installations in the USA than anyone else in the market.

## ELECTRONIC LINE SHAFT SOLUTION

Rockwell Automation has applied its knowledge of the newspaper industry to redefine the requirements for Electronic Line Shaft solutions in the printing industry. New chapters have been defined in the area of inertia adaptation, feedback predictions and position loop registration from drive-to-drive, to maintain precise velocity and position control.



Rockwell Automation, PowerFlex, PowerFlex 700S, and ControlLogix are registered trademarks of Rockwell Automation. Flex is a trademark of Rockwell Automation. Trademarks not belonging to Rockwell Automation are property of their respective companies.

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

### Power, Control and Information Solutions Headquarters

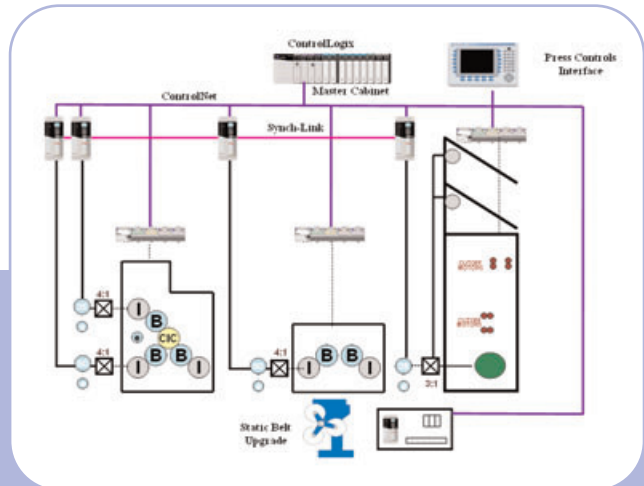
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## TYPICAL PRINT APPLICATION

PowerFlex® 700S AC drives are easily integrated into the ControlLogix® platform allowing press reconfiguration from a line shaft to a shaftless control system. Local unit controls are wired into Allen-Bradley Flex™ I/O to allow both local and remote control of press functions. By means of direct coupling of standard AC motors to existing press gearing, lineshafts and gear boxes are eliminated, providing an individual Unit Make Ready functionality. The PowerFlex SynchLink™ AC drive-to-drive communications allows sub µsecs position timing of couple-to-couple registration providing critical synchronization. This eases production scheduling through faster Make Readys, higher production speeds, better color registration and lower maintenance costs.



Rockwell Automation's PowerFlex Electronic Line Shaft solutions improve the overall print quality by using patented technology such as inertia adaptation to reduce disturbances associated with gears and mechanical connections. This feature coupled together with an internal high speed position loop and velocity loop including inertia compensation creates a virtual position reference. This reference is utilized as a synchronization signal for multiple couples. The signal is then distributed on a dedicated high speed drive-to-drive SynchLink™ communication network, which achieves superior position accuracy compared to other Electronic Line Shaft solutions. This performance delivers the high resolution color registration results vital in today's color demands in the printing industry.