



7900 Durand Avenue, P.O. Box 0361  
Sturtevant, Wisconsin, U.S.A. 53177  
Tel: 262.554.7977 Fax: 262.554.7041  
Toll Free: 1.800.548.2169  
E-mail: sales@drivesourceusa.com  
Website: www.drivesourceusa.com

## **PULP AND PAPER INDUSTRY**

For many years, DSI/Dynamatic® Eddy-Current equipment has been selected for automatic paper-making machinery because of its basic simplicity, ease of maintenance, low initial cost, and long, trouble-free operation.

DSI/Dynamatic® Eddy-Current clutches, drives and brakes, with their compact, remotely located electronic controllers, all contribute to low cost, high quality paper production. Accurate speed, tension and torque control, with regulated acceleration, deceleration and braking, are the prime performance advantages. A special modification to the controller, known as Mutuatrol®, provides automatic acceleration and deceleration control. This circuit applies “brake” or “drive” automatically, in response to a speed adjustment by the operator. The controller for Dynamatic® payoff brakes provides constant tension throughout the reduction in roll diameter. It also contributes to constant tension control during acceleration and decelerations, which is so important to the manufacture of fine paper.

The pulp and paper industry involves three basic areas: paper making, paper converting and printing. Paper converting and printing of one kind or another can be found in all states, while paper making can be found in most states. Because of the universality of the industry and the demand for paper and paper products, the paper industry is one of the largest industries for adjustable speed electrical drives.

There are numerous applications for adjustable speed drives in the paper industry—possibly more than in any other industry. All types of drives are used, including constant torque, constant horsepower, fan loads, etc. The following list shows some of the most common applications for which DSI/Dynamatic® has furnished drives. Most of these applications can be done with any of the three drives: Eddy-Current, DC or adjustable frequency. All the applications on this list have been done using DSI/Dynamatic® Eddy-Current drives. Included in the list are applications spanning the horsepower range from fractional through several thousand horsepower drives.

For further information or details on these and more conveyor applications, please contact one of our application specialists.

Typical adjustable speed drive applications in the paper industry are as follows:

**1. Wood Room Drives**

Log Conveyors	Drum Rolls
Slashers	Chippers
Log Feeders	Chip Conveyors
Barking Drums	Grinders

**2. Pulping Room Drives**

Chip Conveyors	Lime Feeders
Feeder conveyors	Deckers
Chip Meter	Savealls
Agitators	Bark Presses
Digester Drives	Refiner Feed Screws

**3. Machine Room Drive**

Rectifier Rolls	Breaker Stacks
Line Shafts	Size Presses
Line Shaft Helpers	Reel Drives
Suction Couches	Unwinders
Lump Breakers	Rewinders, Surface
Presses	Rewinders, Center
Smoothing Rolls	Mount Hope Rolls
Felt Washers	Rider Rolls

**4. Converting Drives – General**

Laminators	Rewinders, Surface
Embossers	Rewinders, Center
Collators	Folders
Printers	Cutters
Coasters	Sheeters
Slitters	Delivery Conveyors
Formers	

**5. Converting Drives - Printing**

Printing Presses	Fans
Printer – Slotter	Unwinders
Pumps	Winders

**6. Boiler Plant And Chemical Recovery Drive**

Hog Fuel Conveyors	Lime Kiln Feeders
Bark Presses	Lime Kiln Drives
Conveyors	Salk Cake Feeders
Stokers	

High humidity and the presence of chlorine or sulphur are characteristic of most paper mills. Many drives involved with chip handling, digesting, bleaching, and the wet end of the paper machine are frequently hosed down. Some drives are actually located outdoors and are therefore exposed to all sorts of weather conditions. Eddy-Current drives have special paper mill modifications available.

Control requirements of the paper industry are usually relatively simple. In some areas, particularly on the paper machine itself, drift and tracking accuracy are the main points of consideration. In many areas of paper converting and printing, load regulation is also extremely important. Control equipment is available to meet all the industry requirements. Actual specification of control accuracies (load regulation, drift, tracking) is very important and is a point that should be addressed when considering controls, such as our Model EC-2000 Digital Control.

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*Application Engineering • Quality Products • Total Solution*