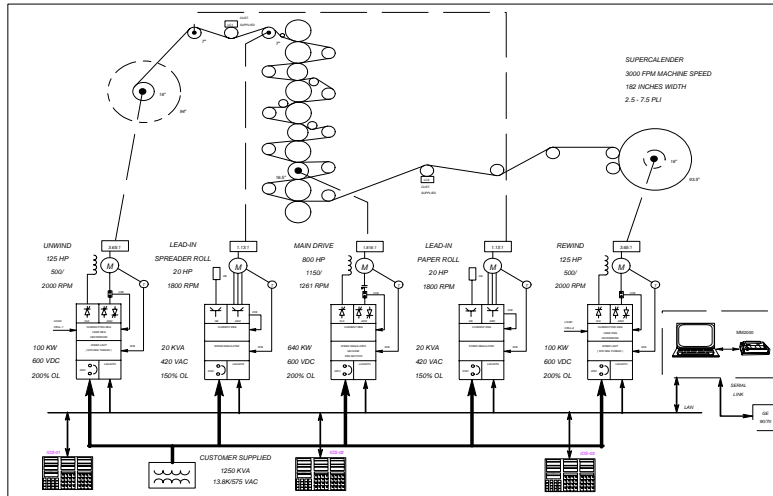


Supercalender System Diagram



Mechanical Components of a Supercalender

Associated Drive Control Concepts

Regenerative Drives

<p>Unwind High inertial load. The parent roll of paper is driven from the center spool. Top speed in the range of 3500 fpm with high rates of acceleration and even higher rates of deceleration.</p>	<p>The high inertial load and the high rates of acceleration / deceleration normally determine the power rating of the unwind drive. The unwind drive must provide the sheet tension over the entire diameter range requiring constant power operation.</p>	<p>Yes</p>
<p>Lead In Roll and Spreader The steel roll is used to change the sheet path. The spreader roll spreads the sheet to eliminate any wrinkles going into the stack</p>	<p>The lead in rolls are to be speed synchronized with the paper so as to minimize its influence on the sheet tension. The spreader configuration varies and is used to spread the sheet.</p>	<p>Yes</p>
<p>Calender Stack. The calender stack consists of alternately placed hard rolls and soft (filled) rolls to create the smooth finish on the sheet. One hard roll of the stack is driven. The stack of rolls is nipped together with high pressure.</p>	<p>The calender stack is the speed regulated master section for the process. The steady state motor load is due primarily to the deformation of the rolls.</p>	<p>Yes</p>
<p>Rewind The rewind is similar to the unwind application except that it is winding up the paper.. The wound roll of paper will be taken to a finish winder for shipment to the customer.</p>	<p>The high inertial load and drive power considerations must be met as on the unwind. Often the same motor design can be used for the unwind and rewind.</p>	<p>Yes</p>