

APPLICATION BULLETIN

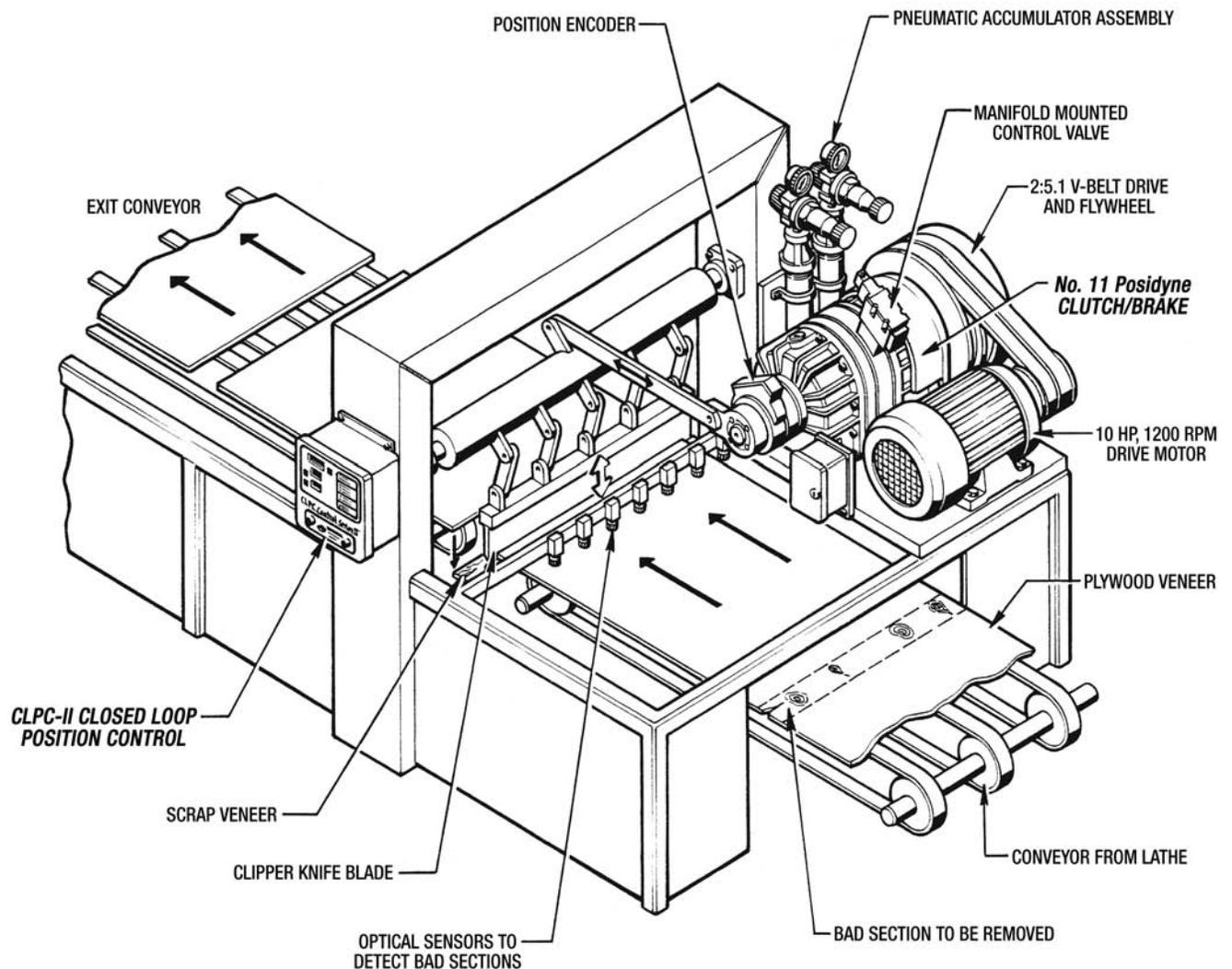


APPLICATION: Veneer Clipper Drive

INDUSTRY: Plywood/Veneer Plants

PRODUCT: Oil Shear *Posidyne* Clutch/Brake & CLPC II

VENEER CLIPPER DRIVE



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WHERE THEY ARE USED: The Clipper is used in Plywood/Veneer manufacturing plants to clip (cut) out bad sections of veneer before sold or used in manufacturing plywood.

HOW THEY WORK: A thin continuous sheet of veneer is peeled off a log in the peeling lathe. It is scanned for flaws as it passes to the clipper. The Clipper is a high-speed guillotine style knife used to cut out the flawed areas and cut the veneer to useable lengths. The Clipper is often driven using air cylinders. A **Posidyne** Clutch/Brake with a crank arrangement can be used to actuate the Clipper at high speed, and very accurately.

PROBLEMS SOLVED:

Rapid Cycling - The existing air cylinder is relatively slow for today's high speed line: If a small flaw is detected, a minimum of 12" of scrap is generated. With a constant speed flywheel driving the **Posidyne** Clutch/Brake with the harmonic crank, the "explosive" action can cut out a small fraction of that length.

Consistent Accuracy - The **Posidyne** clutch/brake exhibits negligible torque changes throughout its life, or during cold start to hot run reducing phase shift. The result is consistently accurate clipping with no adjustments required.

The Clippers require servo like accuracy to ensure the linkage rest position is maintained. This is easily achievable using a **CLPC II Closed Loop Positioning Control**. The **CLPC II** uses a pulse gear and quadrature encoder, attached to the Clutch/Brake's output shaft, to determine position. The control's software uses a running average algorithm of stopped positions to constantly adjust the brake trigger point to hit absolute position. The result is extremely accurate cutting from a simple, rugged, oil shear clutch/brake.

Longevity - Employing a standard motor and flywheel that are allowed to run constantly and a **Posidyne** Clutch/Brake to provide smooth controlled drive engagement is a key strategy to ensure long, maintenance free life. The **Posidyne** Clutch/Brakes totally enclosed housing, with **Oil Shear Technology** ensure reliable service in dusty, dirty, wet, and hot environments.

IMPORTANT FEATURES:

- CLPC Closed Loop Positioning Control - Servo like accuracy from a simple, rugged oil shear clutch/brake.
- Totally enclosed, oil cooled unit for long service life with low maintenance in the harsh lumber industry environment.
- Oil shear technology and innovative friction materials provide smooth controlled torque for quick, smooth acceleration and deceleration.
- Consistent starts and stops with no adjustments required.
- Quick response for high speed cycling, 600 CPM or more.



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