

APPLICATION BULLETIN

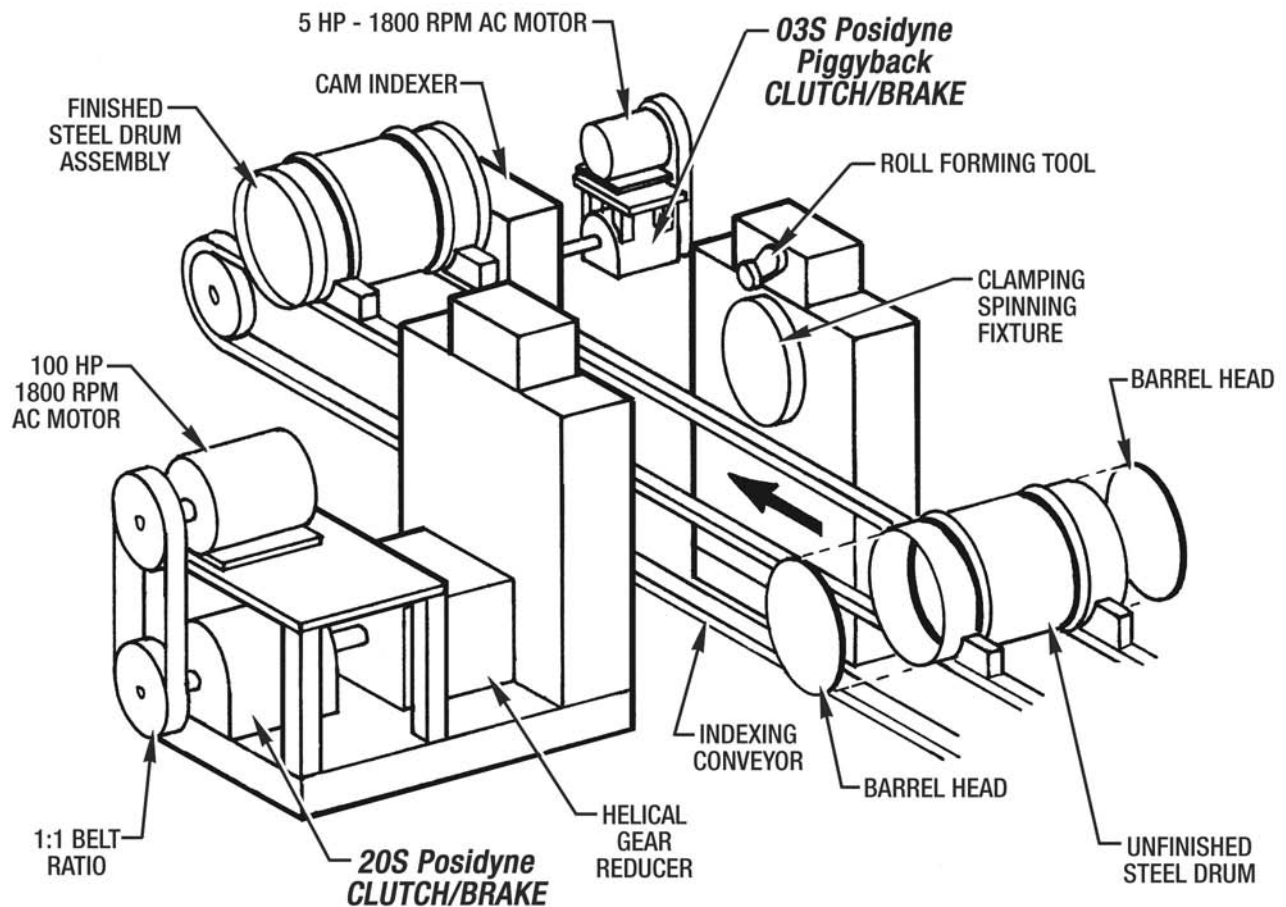


APPLICATION: Steel Drum Assembly Machine Drive

INDUSTRY: Container Manufacturing Industry

PRODUCT: Posidyne Clutch/Brakes

STEEL DRUM ASSEMBLY MACHINE DRIVE



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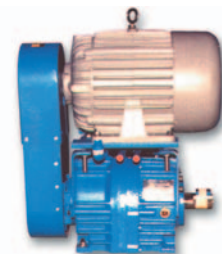
DRIVE REQUIREMENTS: The conveyor must index ahead on command to advance a steel drum into position for roll seaming both heads onto the drum body. A small **Posidyne** Clutch/Brake serves as the index-on-command conveyor drive, while a large **Posidyne** Clutch/Brake rotates the drum and head assembly for rolling two head-to-shell seams simultaneously.

APPROACH: Since the conveyor indexer requires only a 5 HP 1800 RPM motor, a model 03S Piggy-back unit was installed to drive the indexer. The clamp-spin fixture requires a 100 HP 1800 RPM motor for power, and a model 20S water-cooled **Posidyne** Clutch/Brake was put into service. Due to the severe duty required, sheaves driving the model 20S-WC are deliberately large, thus acting as flywheels to store additional energy during clutch engagement. The output is direct coupled to the clamp-spin fixture gear train that gears down from 1800 to 100 RPM at the work fixture. Clamping pressure comes from separate hydraulic cylinders.

SEQUENCE: The **03S Posidyne** Clutch/Brake is signaled to index the conveyor which positions the assembled but unsealed barrel cylinder between two clamp-spin fixtures. When in position, the clamp fixtures are hydraulically moved toward each other, clamping both heads to the barrel. The **20S Posidyne** Clutch/Brake is signaled to engage the clutch, accelerating the barrel assembly up to 100 RPM. Two roll forming tools are forced against the head flanges and seal the heads. As the tools are retracted, the **Posidyne** Clutch/Brake is signaled to engage the brake & brings the barrel to a stop. It is then released, and the index conveyor is cycled by the **03S Posidyne**, moving the sealed barrel out of the machine and an unsealed barrel into the machine. Cycle is complete.

FEATURES:

- The **03S Posidyne** Clutch/Brake provides dependable operation and has eliminated the constant maintenance that a dry type clutch brake had required.
- The **20S Posidyne** Clutch/Brake provides smooth and controllable acceleration and deceleration of the cyclic drive components, reducing the shock loads the dry type clutch brake had created.
- The self contained enclosed **Posidyne** Clutch/Brake allows a simple flexible coupling on the output shaft and standard type V-belt sheaves to be used, reducing the number of special parts in the machine.
- The **20S Posidyne** Clutch/Brake has proven to be virtually maintenance free even under the severe high inertia conditions.



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