

# APPLICATION BULLETIN

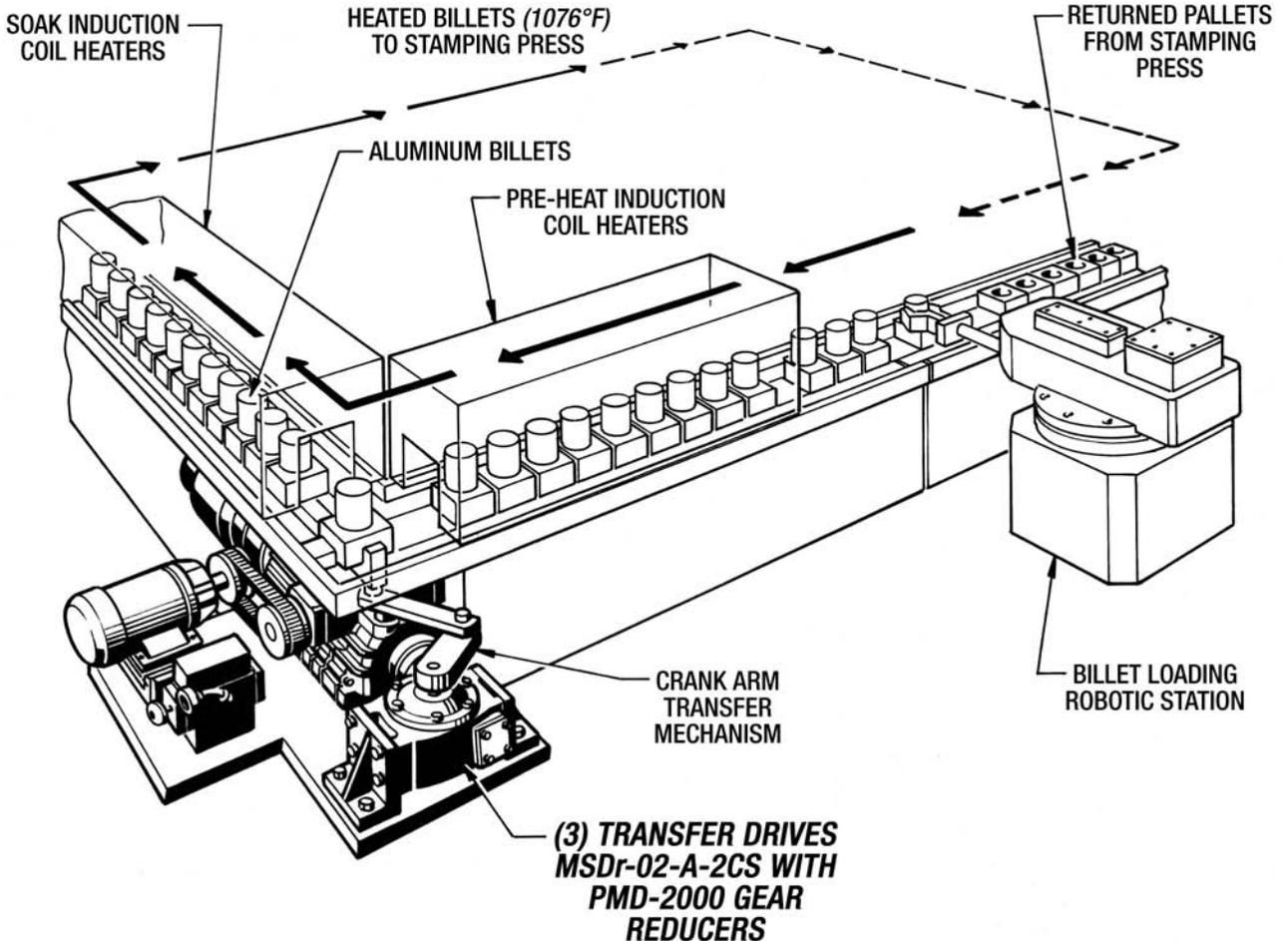


**APPLICATION:** Aluminum Billet Induction Heating Transfer

**INDUSTRY:** Wheel Manufacturing

**PRODUCT:** Posidyne Multi-Speed Drive/PMD-2000 Gear Reducer

## ALUMINUM BILLET INDUCTION HEATING TRANSFER



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**WHERE THEY ARE USED:** Aluminum Wheel Manufacturing where wheels are stamped out of an aluminum billet.

**HOW THEY WORK:** Aluminum billets are loaded onto pallets by a robot. There are three transfer drives that advance the billets past a series of induction heaters. At each station an induction heater comes down over each billet to heat it, then lifts up to let it transfer to the next station. The billets progressively heat up to 1076 degrees F. The billets are moved by a robot to a press that stamps them into car wheels. Empty pallets are returned to the load station using (2) **PMD-2000's**.

The transfer drives are **Posidyne** Multi-Speed Drives, model #MSDr-02-A-2CS with a **PMD-2000** Gear Reducer. The gear reducer output has a crank arm and linkage to connect it to the transfer bar. Instead of lift drives there are spring-loaded dogs that push the pallets only in the forward stroke.

**PROBLEMS SOLVED:** The Multi-Speed Drive provides a low-speed and a high-speed clutch in a single package. The low-speed is for the forward transfer so that the billets do not shift, or fall over. The high speed returns the unloaded transfer bars quickly to save production time. The **MSDr** and **PMD-2000** Gearbox were sold as a complete drive package for ease of OEM assembly.

### IMPORTANT FEATURES:

- Dual Clutch Multi-Speed Drives (**MSDr**) provide low speed advance when pallets are loaded and high speed retract when pallets are empty.
- Advanced **Oil Shear** Technology provides accurate starts and stops as well as reliable, dependable service and improved service life.
- **Oil Shear** Design provides increased heat dissipation.
- Totally enclosed design protects the unit from hostile environments, and the unit will not contaminate environment.
- Integral drive package including motors, clutch/brake, reducer, & valves provides easy installation, and a single source drive system.



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