



Photo courtesy of Omni Metalcraft Corp.

Product

700 Series Speed Reducers

Application

Robotic Crate Filling Station

Highlights

- Both 700 Series reducer models supplied feature Posivent® pressure compensation systems and double input seal options
- High strength steel output shafts
- Super finished oil seal diameters on input and output shafts
- Multi-position mounting flexibility
- Rugged cast iron housings

A glass manufacturer needed a solution to load glass oven tops and doors onto crates after manufacture. Prior to loading the glass, a foam insert needed to be placed on the bottom of the crate by an operator. A robot would then stack the glass in the crate. When the crate was full an operator would then top the glass stack with another foam insert. The conveyor needed to maintain the appropriate throughput and handle various combinations of crate sizes, types and orientation.

A pit-mounted crate handling chain driven, live roller conveyor (CDLR) with two tilting stations was supplied by Omni Metalcraft Corp. A pallet jack loads a crate onto a heavy-duty plastic belt ramp driven by a motor with a large 700 Series Boston Gear speed reducer. The belt feeds the load onto the infeed tilter powered by a drivetrain that features a motor and smaller 700 reducer. The load is tilted to approximately 45° to allow the operator to place the foam insert. To save on throughput, the CDLR remains angled as the crate is conveyed to the robotic loading station. Once filled, the crate is moved to the outfeed tilter where an operator tops the crate with a second foam insert. The full crate is then returned to a neutral position and picked up by a pallet jack.

Boston Gear 700 Series reducers feature rugged cast iron housings and high-strength bronze worm gears mounted between heavy-duty tapered roller bearings. Large oil reservoirs provide efficient heat dissipation and lubrication for longer operating life.

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