Beth Holzbearbeitungsmaschinen GmbH at home in Lübeck, Germany, is the globally recognized specialist for systems and machines to produce doors and windows. The machine concepts facilitate high production rates with high associated quality: Fast, compact line machines are used for machining transverse pieces and profiling longitudinal elements, while optional CNC stations are used for drilling and pocket milling. Program-controlled, adjustable spindles, supports, guides and roller tracks eliminate having to re-equip machines for workpieces with different dimensions and profiles. Complex profile and groove shapes can be implemented by sequentially using several spindles.

Now, high-performance servo drives with distributed inverters are used as actuator drives. This means that spindles and roller guides can be positioned for the next workpiece almost twice as fast as before. Consecutive orders with a batch size of 1 can now be continually machined without having to reduce the feed velocity – which means typically between four and six parts per minute.

Beth Holzbearbeitungsmaschinen GmbH

Whether series production or batch size of 1: Six parts per minute!

Fast and highly flexible production of doors and windows

Beth solutions for constructing doors and windows
- Complete, customized systems
- Transverse machining
- Longitudinal machining
- CNC drilling and milling
- Series drilling machines
- Conveyor systems

Highlights
- High production rate:
  - Fast continuous transverse & longitudinal machining,
  - Separate station(s) for dedicated CNC machining
- Extremely flexible through program-controlled adjustable spindles, supports and roller tracks → batch sizes of 1 can be quickly machined in fast succession without having to re-equip the machine
- Compact using intelligently designed multi-spindle units
- High precision through
  - stiff machine design
  - spindles in double bearings
  - servomotor actuator drives
  - reaction-free extraction (no impact marks from flying chips)
Control & drive technology for Beth to machine solid wood

- All of the electrical equipment is from Siemens – spare parts are quickly and simply available around the world
- PROFINET
- Distributed drives are used where it makes sense, they
  – save space in control cabinets/smaller footprint,
  – reduce cabling costs
- Energy-efficient drive technology (SINAMICS, SIMOTICS):
  – braking energy is recovered using a common DC link
  – regenerative feedback into the line supply
  – efficiency-optimized control strategies for spindles,
    feeds and positioning drives

SINAMICS S120 M servo drives position supports, roller tracks and spindles in just seconds. This means that several parts can be quickly machined in quick succession in the longitudinal profiling system – without any intermediate stop, at the full feed rate.

Competent and reliable partner for door and window manufacturers

CEO Hans-Joachim Beth: “With Siemens as automation partner, we can offer our customers individual, state-of-the-art solutions accompanied by global service and spare parts availability – and more precisely over the complete lifecycle of the system.”