



Automated Coin Bagging Line

The Challenge

Design of an automated coin bagging line to handle different coin types and various bagging quantities ranging from 500 to 4000. A typical cycle time requirement was 6 seconds for a bag containing 1000 coins.

Our Solution

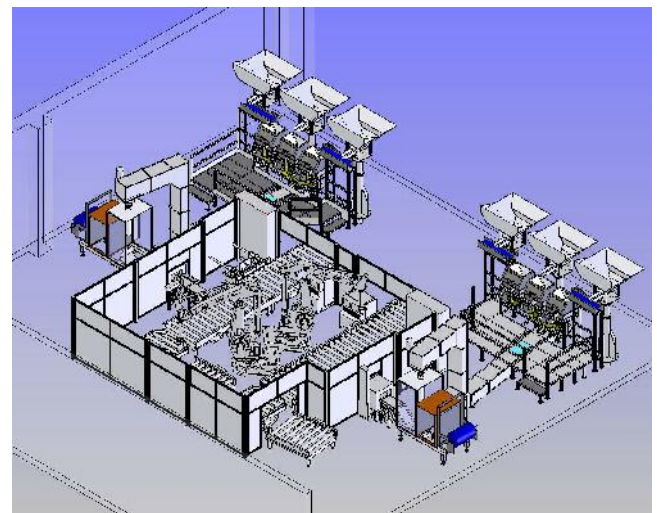
Six coin feed hoppers were split into two groups of three and arranged either side of a central palletising area.

Each hopper fed a high speed coin counter via intermediate vibratory feeds and conveyors. The counted coins were then ejected down a chute leading to a central pocketed conveyor that elevated the coins above a bagging machine.

The coins entered the bagging machine via a hopper and bagged coins exited from the base of the machine onto a conveyor that transferred the bag past a print head and onto a dynamic check-weighing machine. Reject bags were ejected at this point and passed bags transferred into the central palletising area.

Pallets were manually loaded to a powered roller conveyor and upon entering the bag stacking station the pallet was centralised by a pneumatic ram system and a series of sensors.

Robot loading was carried out to the required stacking menu utilising ABB IRB660 palletising robots with vacuum lifting heads. Full pallets exited the cell via a further powered conveyor.



Coin Bagging Line Design

Disciplines Used

- Stress analysis
- Conceptual design
- Mechanical & electrical detailed design
- Project management of manufacture and assembly