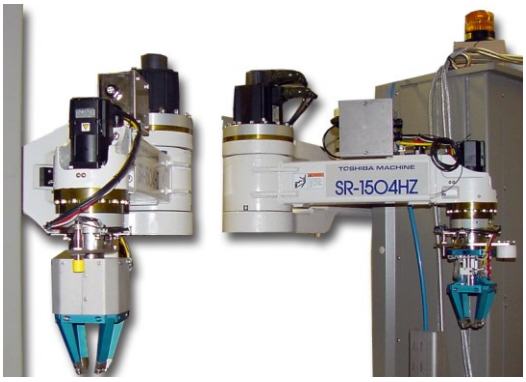
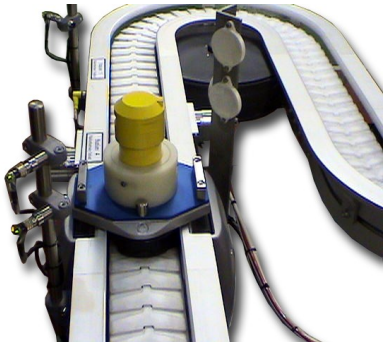
Lead Pot Robotic Handling System for Radioactive Vials

This special purpose automatic system was designed and manufactured for the automated handling of lead pots that contained radioactive vials. TQC were involved from feasibility study through process validation exercises and then into the full engineering of the automation system to result in a fully accepted facility.

The radioactive drug needed to be chilled to below –23°C within a short space of time. Due to the temperature and the radioactivity of the product it was important that during the process the product was away from human contact.

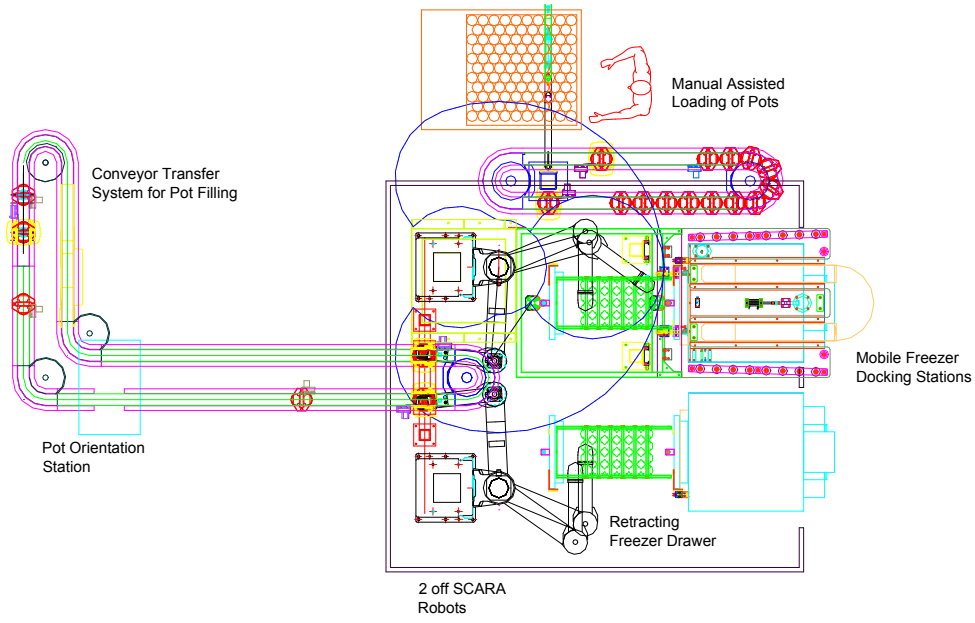


The storage of the product was remote to the production area, which needed TQC to develop a specially designed mobile freezer system. TQC provided full project management facilities integrating robots, conveyor systems, pallet docking stations, mobile freezers, control system etc all within a GAMP 4 project.



Key Features

- Toshiba SCARA robotic handling
- Robot Payload 14Kg
- Product Storage at below –23°C
- Flexlink conveyor system
- Touch Screen HMI terminal with Allen Bradley SLC5/04 PLC and Controlnet Flex I/O
- Barcode reading & product tracking and colour recognition



The system process involves docking of an empty mobile freezer unit, this is then filled with empty pots. The pots are then chilled to the storage temperature.

To fill the chilled pots, the robots open the mobile freezer drawers and sequentially unload each pot and loads it onto a transfer conveyor. After filling a second robot, the system loads a second mobile freezer with the pots.

This complete process is carried out to tight timescales to ensure the product is swiftly chilled and the low temperature is maintained.

- **Fully Automated Production Facility for the Medical Industry**
- **GAMP 4 Compliant Project**
- **Clean Room Environment**
- **Automated Heavy Lead Pot Handling**
- **Comms for MIS**
- **Radioactive Product at Low Temperature**