

Provers and ovens

Key Issues:

- Humidity
- Ambient temperature compensation
- Temperature control
- Safety
- Colour monitoring
- Energy consumption
- Conveyor speed
- Heat exchanger
- Waste



Constant temperatures are required across the prover

Significant energy savings

The Prover retains the dough in a temperature and humidity controlled storage facility to enable the product to rise as the yeast activates. Constant temperatures are required across the prover to allow the dough to rise in an even uniformed manner, thus maintaining consistency and quality of the batch.

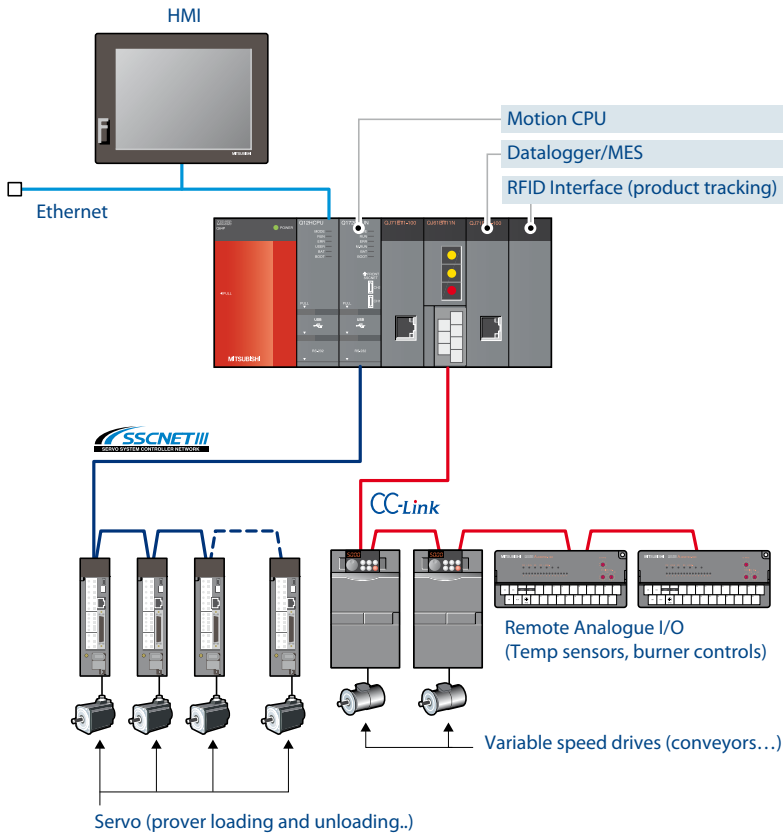
Critical areas of the prover require the speed and temperature to be maintained accurately and with relative compensation for ambient conditions. Significant energy saving is available with variable speed drives controlled fan and conveyor systems.

By utilisation of the advanced energy saving characteristics of the Mitsubishi variable speed drives range conveyor speeds are optimised to best speed and energy saving performance levels.

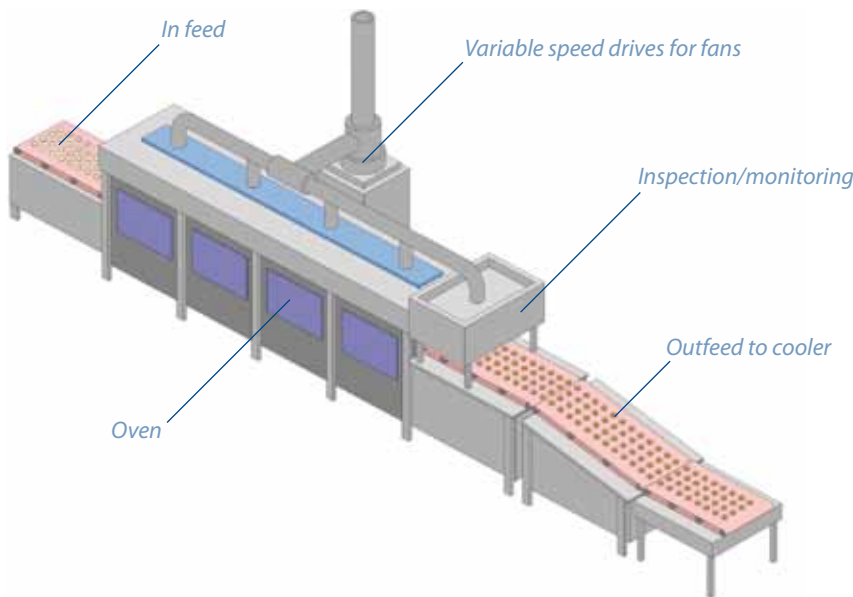
Oven solutions

Most modern industrial ovens are of the tunnel type, they are generally available in modules so the length of the oven can be adjusted to suit the requirements of the bakery.

Control of the various aspects of the system include, bake times, loading and unloading, temperature settings, conveyor controls, fan optimisation, HMI display and track and trace.



Integrated control solutions result in quick ROI



Variable speed drives reduce energy consumption to boost profitability



Control strategy can include management of the recipe

Management of the recipe for the bake can also be included into the control strategy, with alarm and event annunciation and trending.

Interfacing to third party systems such as vision, burner controllers and RFID sensors is made easy using Mitsubishi's open network architecture.

The oven consumes the most energy in the bakery so any savings made can be very beneficial. Proven Mitsubishi inverter technology used to optimise fan controls has consistently resulted in quick returns on investment and continued ongoing efficiencies.

Mitsubishi Automation System Solutions:

- Accurate temp/humidity control
- High torque/accurate feedback due to loads on conveyor
- Speed control
- Energy saving – fan control
- Synchronised Drives
- Infrared and Vision systems interfacing
- Integrated safety