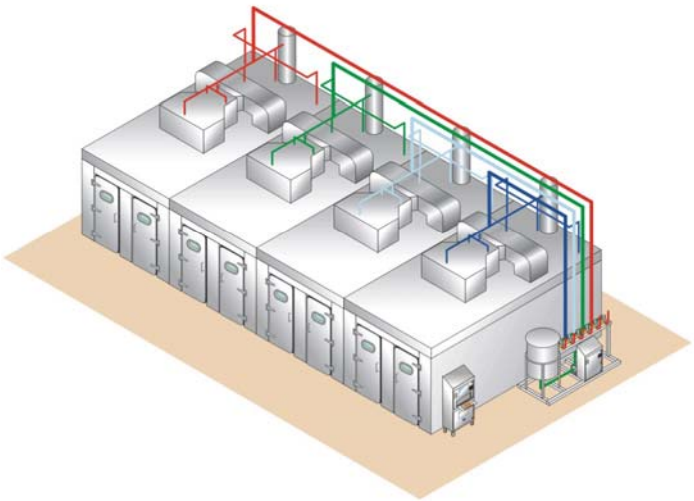
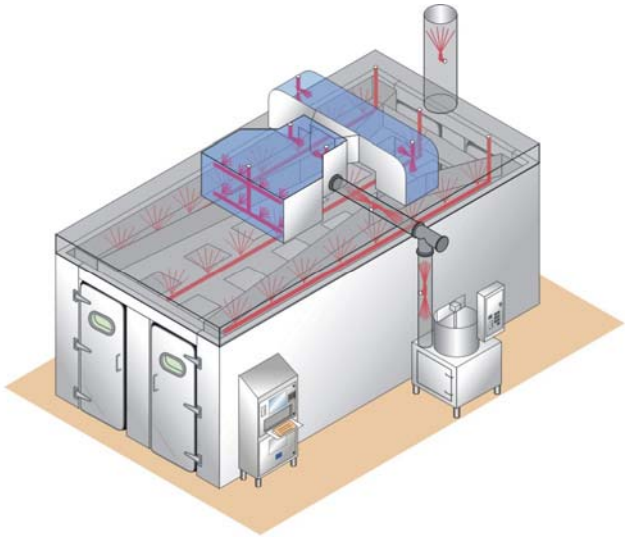
Automated CIP Systems

FOR BATCH THERMAL PROCESS SYSTEMS



Single-pass CIP System for Multiple Ovens



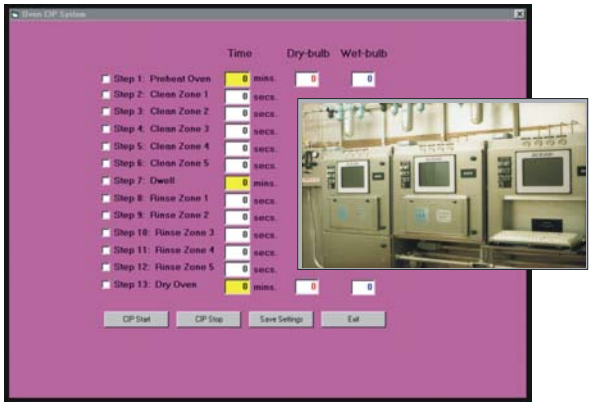
CIP Nozzle Placement Ensures Consistency

CONSISTENCY

- Control of the CIP variables
  - Time
  - Temperature
  - Detergent concentration
  - Physical action
- Automation = greater certainty

FLEXIBILITY

- Develop a custom CIP cycle unique to that oven
  - Adapt based on inspection and process schedule
  - Eliminate continual training



FOOD SAFETY

- Ensure sanitation and rinsing is complete
  - Remove operator influence
  - Maximum equipment life
- Document the optimal cycle is used consistently
  - Historical record for food safety

COST SAVINGS

- Save water, chemicals, energy, labor, and production time
  - Optimize for effectiveness without waste
  - Maximize uptime for production

OPERATOR SAFETY

- Prevent operator exposure to hazardous chemicals
- Maximize exposure to mechanical hazards and confined spaces

RETROFIT

- Improve food safety, and reduce labor costs by upgrading existing equipment to ALKAR automated CIP system

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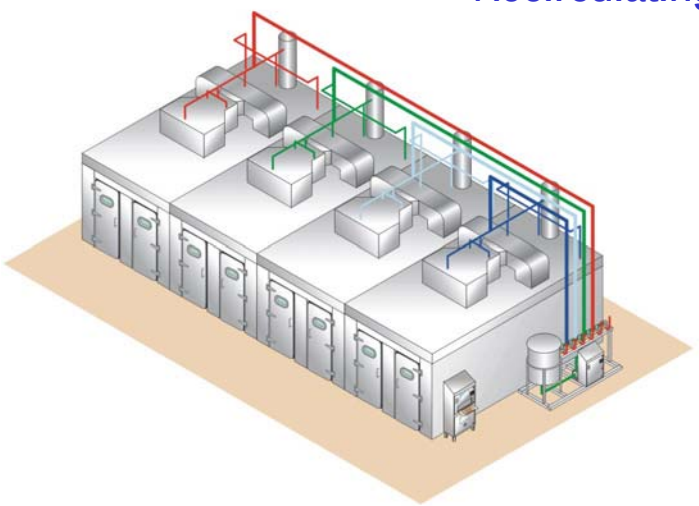
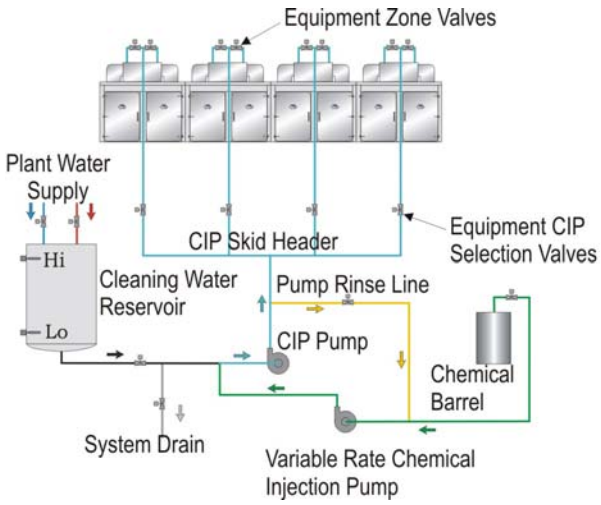
Automated CIP Systems

Recirculating CIP System





AUTOMATED CONTROL

- Direct chemical injection eliminates operator error
- Control of valves and pumps ensures that accurate time and flow rates are achieved
- Safety switches control access

ADVANTAGES

- Totally automated, PC control of solution concentration, time, temperature, and blower operation
- Less detergent and rinse water usage
- Higher flow rates of cleaning solution
- Lower sewage cost
- Reduced operating costs
- Simplifies cleaning operation
- Helps maintain peak operating efficiency
- Reduces cleaning operating costs
- Saves labor, water, and chemicals
- Offers cleaning consistency for better quality control

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