

# Human Robot Collaboration (HRC) and Safety





# Industries Using HRC Today

- Agriculture
- Automation
- Breweries
  - Energy
- Manufacturing
  - Medical
  - Technology
- Transportation

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# Applications Requiring Human- Robot Collaboration

- Pick-and-place
- Injection Molding
  - CNC
- Machine Tending
  - Screw Driving
- Lab Analysis & Testing
- Packaging & Palletizing
  - Quality Inspection
  - Assembly
  - Polishing, Gluing
- Dispensing & Welding



# Make an HRC Space

**Human Collaboration Spaces allow you to include safety measures built into the space that protects your employees. The space may also allow your robot to move around from one function to the next.**

# Safety Precautions

**Using safety precautions with your industrial robot systems can protect your employees involved in various processes. Collaboration spaces set specific distances that stop employees from coming within reach of a robot. Safety fencing and sensor technology can also help prevent an unnecessary robot versus human interaction.**

# Ensuring Human Safety

**Collaborative robots are specifically built with human safety in mind. On the other hand, other industrial robots must be changed and guarded to ensure human safety.**

**Collaborative robots feature power and force limiting, hand guiding, stopped state monitoring, safety zones, and variable speeds to ensure human safety.**

# Risk Assessment

**JHFoster always recommends that customers perform a 'risk assessment' to be sure that safety standards are met.**

**In addition, we encourage you to keep in mind that safety depends on the process as well as the robot.**

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