



Emergency Stop, Hold, and Restart Recovery Guide

Category: Emergency Response

Audience: Operators, supervisors, maintenance

Badge: E-Stop

Guidance for safe response to E-stops, robot holds, fault recovery, and restart after interruption.

Important limitation: This document is a general planning aid only. It does not replace OSHA requirements, employer safety programs, equipment manuals, SDS review, qualified risk assessment, training, lockout/tagout procedures, PPE selection, or competent safety review.

When to Use Emergency Stop

- Use E-stop when there is immediate danger to people, unexpected robot motion, collision risk, guarding breach, fire, smoke, coolant leak, electrical concern, or unsafe program behavior.
- Do not use E-stop as a routine cycle-stop method unless required by site procedure.

Before Restart

- Identify the cause of the stop or hold.
- Clear personnel, fixtures, tools, loose parts, and obstructions from the robot envelope.
- Confirm torch, cable dress, wire feed, grounding, gas flow, cooling flow, and fume control readiness.
- Run the approved restart or recovery procedure only by trained personnel.

Escalation

- If root cause is unknown, stop and notify supervision or maintenance.
- Document repeated faults, near misses, collisions, or unexpected motion events.

Field Checklist

Item	Verified	Notes
Cause of stop identified		
Cell cleared		
Fixture/workpiece secure		
Torch/cables clear		
Fume/cooling/gas verified		
Program position verified		

Item	Verified	Notes
Supervisor notified if needed		

Reference Basis

- OSHA 29 CFR 1910 Subpart Q - Welding, Cutting and Brazing.
- OSHA 29 CFR 1910.147 - Control of Hazardous Energy (Lockout/Tagout).
- NIOSH welding fume and manganese exposure resources.
- RAS equipment planning information for robotic arc welding systems using 480V / 60Hz / 3-phase power, RAS-500PR power supply, water-cooled torch packages, torch cleaning, and wire cutting stations.

Revision: RAS Safety Knowledge Base expanded safety resource set. Verify against current site-specific rules before use.