



PPE and Arc Flash Protection Guide

Category: PPE

Audience: Operators, visitors, supervisors

Badge: PPE

Guidance for welding helmets, eye protection, flame-resistant clothing, bystander protection, and maintenance PPE planning around robotic welding cells.

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.

PPE Selection

- Select PPE based on arc process, amperage, task, proximity, hot work, spatter, fumes, noise, and site rules.
- Protect bystanders and visitors from arc flash with barriers, distance, curtains, or controlled viewing areas.

Maintenance PPE

- Maintenance may require additional PPE for sharp wire, hot nozzles, grinders, electrical work, coolant spills, and handling contaminated components.

Field Checklist

Item	Verified	Notes
Helmet/eye protection selected		
FR clothing reviewed		
Gloves selected		
Visitor protection provided		
Maintenance PPE defined		
Arc viewing controlled		

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.