

# Arc-Flash Rating Explained

## Technical Brief



### Arc-Flash Standards and Regulations

There are several standards published including ASTM F887, NFPA 70E, and OSHA regulations 1910 and 1926, which cover arc-flash protection for workers. Some of these standards provide specific testing criteria for certain product families. Others, as is the case with OSHA, provide general requirements for the whole fall arrest system. As such, many MSA products include both ASTM F887 and OSHA ratings for arc-flash protection.

### ASTM F887 Arc-Flash Requirements

The ASTM F887 standard requires fall protection lanyards and harnesses to be exposed to an arc-flash of 40 cal/cm<sup>2</sup>. After the arc exposure, load bearing components cannot experience afterflame for greater than 5 seconds. Accessories or non-load bearing components cannot have an afterflame for longer than 15 seconds. There cannot be any melting or dripping of any load bearing material. The harness or lanyard then must be subjected to drop tests according to the ANSI Z359 standard.

The ASTM F887 standard does not have provisions for certifying products to other non-ANSI standards, such as CSA or ABNT, nor does it have provisions for other products, such as SRLs.

### MSA Product Families

For international versions of certain product “families,” MSA uses the same materials and construction across all the versions within. For example, the materials used in an ANSI certified V-SERIES® Utility lanyard are the same as those used in a CSA V-SERIES® Utility lanyard.

While MSA cannot claim certification to ASTM F887 for international versions of these products, we can state that the entire family of utility lanyards meets the 40 cal/cm<sup>2</sup> arc-flash exposure testing requirements.

Similar is true for MSA’s V-FIT® Arc-Flash and V-FORM® Arc-Flash harnesses that are certified to both ANSI and CSA standards.

### Other Arc-Flash Tested Products

MSA has also designed and tested other products to the requirements called out in the ASTM F887 standard. This includes exposing the product to a 40 cal/cm<sup>2</sup> arc-flash and testing the product to the relevant post-arc-flash testing.

One such example is MSA’s V-TEC® Arc-Flash PFL. During arc-flash exposure, the lifeline of the PFL is extracted and clamped. The same requirements for afterflame apply, and then the PFL is dynamically tested.



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