

Q-Series Welder and Arc Length

Arc length adjustment is a feature on the Spanesi Q-Series welders that can improve weld appearance and penetration. The term “arc length” refers to how far the welding wire is burning from the surface.. A lower arc length will produce a narrow more focused welding bead with higher penetration. A higher arc length will produce a wider, flatter welding bead with less penetration.

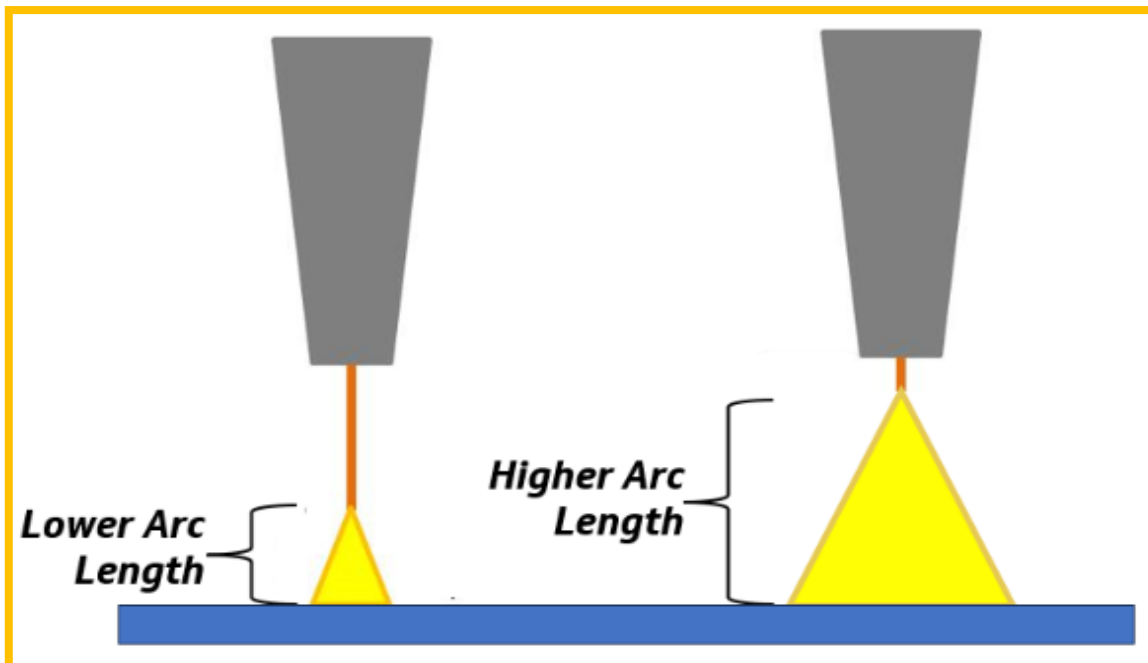
As you can see in the diagram below, the molten material (yellow cone) is wider with a higher arc length. This means the heat or amperage from the weld is dispersed over a larger area. Adversely, a lower arc length disperses the heat over a smaller area which results in a hotter weld. Also keep in mind that the amount of welding wire that is dispersed onto the surface remains the same regardless of higher or lower arc length. This also helps with improving the height of the weld bead.

So why should you use the arc length adjustment?

Example 1: Lets say you are welding thin aluminum and the panel is burning through because its too hot. Increase arc length to widen and flatten the weld bead.

Example 2: A technician that continually welds too close to the panel. Increase arc length slightly to compensate for the bad technique. Yes you read the right, the Q5.2 can compensate for bad technique!

Example 3: A weld bead is too tall and lacks penetration. Decrease arc length slightly to add more heat to the weld site resulting in increased penetration.



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