



## Spot Welding Data Aluminum and Aluminum Alloys (Commercial Use)

Most aluminum and aluminum alloys are good conductors of electricity and dissipate heat rapidly. Therefore, they require higher output current and lower force compared to other materials. Relatively short weld times and precise timing are important, due to aluminums narrow plastic range. A forging force may be required to remove cracks and porosity.

Thickness	Gauge	Diam.	Suggested	Tip	Weld	Edge	Weld
			Kadius	Pressure	Current	Overlap	Space
.016"	26	5/8"	4"	200	14,000	1/16"	3/8"
.020"	24	5/8"	4"	300	16,000	3/16"	3/8"
.025"	22	5/8"	4"	390	17,000	7/32"	3/8"
.032"	20	5/8"	4"	400	18,000	1/4"	1/2"
.040"	18	5/8"	6"	450	20,000	1/4"	1/2"
.050"	16	5/8"	6"	500	22,000	5/16"	5/8"
.063"	14	5/8"	8"	550	24,000	3/8"	5/8"
.080"	12	7/8"	8"	600	28,000	3/8"	3/4"
.090"	11	7/8"	8"	700	30,000	7/16"	7/8"
.102"	10	7/8"	10"	800	32,000	7/16"	1"
.128"	8	7/8"	10"	800	35,000	1/2"	1 1/4"

The proper choice of electrode shape and the maintenance of the shape in production are essential to obtain consistent spot welds on aluminum.

Machine Recommendations: Press type, air operated, low-friction roller ram for quick follow-up.

Electrode Recommendation: Class 1 Zirconium.