

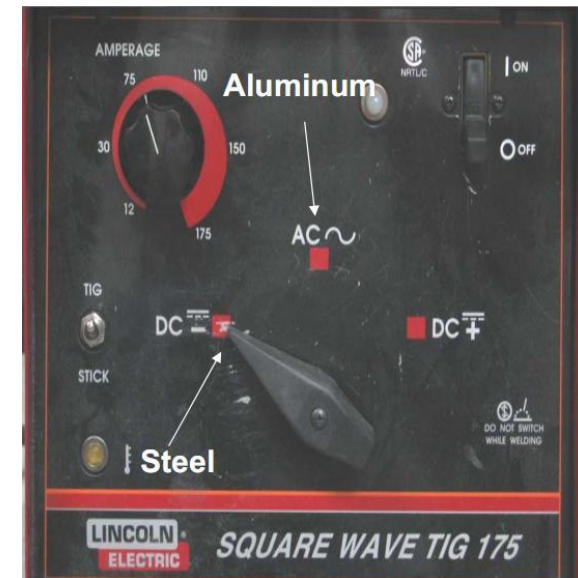
Aluminum... Manual Welding – Alternating Current – High Frequency Stabilized						
Metal Thickness	Joint Type	Tungsten Electrode Diameter	Filler Rod Diameter (If Required)	Amperage	Gas	
					Type	Flow-CFH
1/16"	Butt	1/16"	1/16"	60 – 85	Argon	15
	Lap	1/16"	1/16"	70 – 90	Argon	15
	Corner	1/16"	1/16"	60 – 85	Argon	15
	Fillet	1/16"	1/16"	75 – 100	Argon	15
1/8"	Butt	3/32" – 1/8"	3/32"	125 – 150	Argon	20
	Lap	3/32" – 1/8"	3/32"	130 – 160	Argon	20
	Corner	3/32" – 1/8"	3/32"	120 – 140	Argon	20
	Fillet	3/32" – 1/8"	3/32"	130 – 160	Argon	20
3/16"	Butt	1/8" – 5/32"	1/8"	180 – 225	Argon	20
	Lap	1/8" – 5/32"	1/8"	190 – 240	Argon	20
	Corner	1/8" – 5/32"	1/8"	180 – 225	Argon	20
	Fillet	1/8" – 5/32"	1/8"	190 – 240	Argon	20
1/4"	Butt	5/32" – 3/16"	3/16"	240 – 280	Argon	25
	Lap	5/32" – 3/16"	3/16"	250 – 320	Argon	25
	Corner	5/32" – 3/16"	3/16"	240 – 280	Argon	25
	Fillet	5/32" – 3/16"	3/16"	250 – 320	Argon	25

Stainless Steel... Manual Welding... Direct Current – Electrode Negative						
Metal Thickness	Joint Type	Tungsten Electrode Diameter	Filler Rod Diameter (If Required)	Amperage	Gas	
					Type	Flow-CFH
1/16"	Butt	1/16"	1/16"	40 – 60	Argon	15
	Lap	1/16"	1/16"	50 – 70	Argon	15
	Corner	1/16"	1/16"	40 – 60	Argon	15
	Fillet	1/16"	1/16"	50 – 70	Argon	15
1/8"	Butt	3/32"	3/32"	65 – 85	Argon	15
	Lap	3/32"	3/32"	90 – 110	Argon	15
	Corner	3/32"	3/32"	65 – 85	Argon	15
	Fillet	3/32"	3/32"	90 – 110	Argon	15
3/16"	Butt	3/32"	1/8"	100 – 125	Argon	20
	Lap	3/32"	1/8"	125 – 150	Argon	20
	Corner	3/32"	1/8"	100 – 125	Argon	20
	Fillet	3/32"	1/8"	125 – 150	Argon	20
1/4"	Butt	1/8"	5/32"	135 – 160	Argon	20
	Lap	1/8"	5/32"	160 – 180	Argon	20
	Corner	1/8"	5/32"	135 – 160	Argon	20
	Fillet	1/8"	5/32"	160 – 180	Argon	20



Use a green electrode tip when welding aluminum

Use a red electrode tip when welding steel/stainless steel



TIG Rod Applications

Welding Aluminum

- 5356 (5% Mg)
 - perfect for welding 5xxx series aluminum
 - stronger and more ductile than 4043
 - almost 50% stronger in sheer strength
 - can be susceptible to stress corrosion cracking after heat treatment
 - use if component will be anodized (silver color)
- 4043 (5% Si)
 - General Filler rod for most aluminum welding
 - flows better
 - easier to weld with
 - less prone to weld smut and crater cracking
 - more aesthetic weld
 - less crack-sensitive
 - use if heat treating component or if component will operate above 150 deg F
 - avoid stress corrosion cracking
 - not for anodized components (black)

Welding Steel

- ER70S
 - Mild and Chrome Moly Steel
 - General shop applications with poor fit-up, oily or rusty plates, automotive, sheet metal or construction work

Welding Stainless Steel

- low carbon filler rod for use with 316 SS material