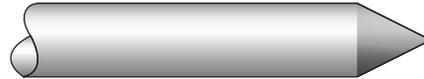


E3[®] Tungsten Recommended Amperage and Electrode Preparation.

Training information on-line. We recommend you review the www.linde-e3.com website. It is a good scientific training for everyone who uses tungsten electrodes. Here you can click the “[Click here to view video](#)” tab which shows a side by side comparison of E3[®] and EWTh-2 ignition after 100 arc starts as well other valuable information and data, such as other videos and documentation like MSDS.

Suggested Method for Grinding E3[®] Tungsten for DC Welding (Electrode Negative)

We suggest grinding to your desired angle then grind a small flat on the tip, just enough to break the point.

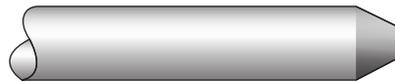


Can I weld AC with E3[®] for metals like aluminum?

Yes E3[®] can be used in both AC and DC processes. Please note that the oxide containing electrodes such as E3[®] will not “ball” the way pure tungsten does, however, this means that there will be less chance of tungsten inclusions within the weldment. Below are suggested methods of grinding for AC welding.

Suggested Method for Grinding E3[®] Tungsten for AC Welding (Square Wave)

- 1) Wave structure: electrode positive 25%, electrode negative 75%
- 2) Tip angle 60° angle with a flat up to 1/3 the diameter of the electrode
- 3) Cranking Amps: as low as possible
- 4) Amps (3/32 electrode): max. 210 A



Fine adjustments may have to be made to suit individual applications

Suggested Method for Grinding E3[®] Tungsten for AC Welding (Sine Wave)

For best results, just break edge off flattened electrode as shown



Please Note: Due to E3[®] Tungsten’s Superior Electron Work Function, in most cases machine current can be reduced or adjusted down by approximately 5%. This can be varied based on weldments, electrode diameter and application.

The table below is taken in part from **AWS 5.12M/A5.12:2009 table A.2**

Approximate current ranges depending upon the electrode diameter

Electrode Diameter		Direct Current				Alternating Current	
		Electrode Negative (-)		Electrode Positive (+)			
in	mm	Pure Tungsten	Tungsten with oxide additives	Pure Tungsten	Tungsten with oxide additives	Pure Tungsten	Tungsten with oxide additives
0.020	0.50	2 to 20	2 to 20	not applicable	not applicable	2 to 15	2 to 15
0.040	1.0	10 to 75	10 to 75	not applicable	not applicable	15 to 55	15 to 70
1/16	1.6	60 to 150	60 to 150	10 to 20	10 to 20	45 to 90	60 to 125
3/32	2.4	120 to 220	150 to 250	15 to 30	15 to 30	80 to 140	120 to 210
1/8	3.2	160 to 310	225 to 330	20 to 35	20 to 35	150 to 190	150 to 250
5/32	4.0	275 to 450	350 to 480	35 to 50	35 to 50	180 to 260	240 to 350
3/16	4.8	380 to 600	480 to 650	50 to 70	50 to 70	240 to 350	330 to 450

The current values are based on the use of argon gas, and these values may vary depending on the type of shielding gas, type of equipment, and application.