

Square Wave™ TIG 175

Processes

TIG, Stick

Product Number

K1478-5 208/230/1/60

See back for complete specs

Input Power

208/230/1/60

Input Current at Rated Output

208V: 64A

230V: 57A

Rated Output

150A/26V/25% Duty Cycle

Output Range

DC: 10-175A

AC: 10-175A

Max. OCV: 59V DC

Max. OCV: 74V AC

Weight/Dimensions (H x W x D)

185 lbs (84 kg)

19.5 x 13.7 x 25.0 in

(495 x 348 x 635 mm)

Sets the Standard for Premium, Economical TIG Welding Performance

Back by popular demand, this great little AC/DC TIG and stick welder delivers classic smooth DC and stable AC square wave welding output – outstanding TIG performance as well as stick welding – It's like getting a stick welder for FREE!

FEATURES

▶ Top TIG Welding Performance

- Square Wave™ Technology – Delivers a low peak current and fast positive / negative transition time. High frequency arc starting is used for both AC and DC TIG welding modes. You experience reduced tungsten spitting, tungsten electrode erosion and a smooth, stable AC welding arc.
- Standard Auto Balance® control automatically delivers optimal mix of cleaning action vs. penetration.
- Excellent low amperage starting performance – down to 10 amps.

▶ **It's Like Getting a Stick Welder for FREE!** With outstanding general purpose AC/DC stick welding capability, you can tackle steel, stainless, cast iron and hardfacing applications, including AWS E6010 electrodes like Fleetweld® 5P+.

▶ **Standard Foot Amptrol™** – Remotely controlling your current level is an added expense with other TIG welders in this class.

▶ **Enhanced TIG Torch Handling** – Includes a rugged Series 17 torch with Ultra-Flex™ cable. The torch is detachable for easy repair or to use optional torches for especially tight spaces or unusual applications.

▶ **Automatic Remote Sensing** – The unit automatically senses when a remote current control, such as the foot or hand Amptrol™, has been connected.

▶ **Shielding gas pre-flow and post-flow** – Built-in 0.50 second pre-flow and 15 second post-flow timers purge and protect the weld and tungsten.



WHAT'S INCLUDED

K1478-5 Includes:

- ▶ Series 17 TIG Torch, 12.5 ft (3.8 m), with one-piece cable
- ▶ 3/32 in (2.4 mm) Collet Body
- ▶ 3/32 in (2.4 mm) Collet
- ▶ 3/32 in (2.4 mm) x 7 in (177 mm) Ceriated Tungsten Electrode
- ▶ Long Backcap
- ▶ 7/16 in (11.1 mm) diameter Alumina Gas Cup Nozzle
- ▶ Twist Mate™ Torch Adapter
- ▶ Foot Amptrol™ with 15 ft (4.6 m) cable
- ▶ Gas Regulator & Hose
- ▶ Stick Electrode Holder (200 amp) with 10 ft (3.1 m) cable and Twist Mate™ Connector
- ▶ Work Clamp & 10 ft (3.0 m) Cable
- ▶ 6 ft (1.8 m) Input Cable with NEMA 6-50P Plug

INPUT



OUTPUT



Two Year Extended Warranty Available in U.S.A. and Canada.

APPLICATIONS

- ▶ Motorsports
- ▶ Aviation
- ▶ Maintenance & Repair
- ▶ Light Industrial Fabrication



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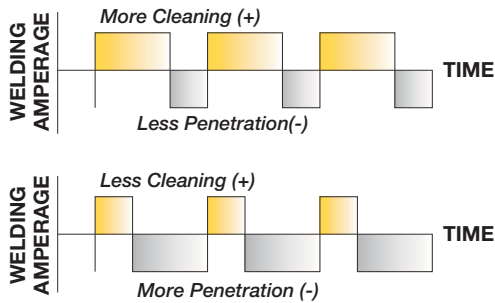
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THE WELDING EXPERTS®

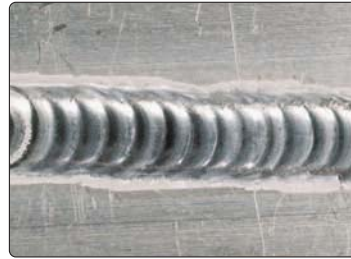
PERFORMANCE

AC Auto Balance® Controls — Automatically sets the optimal cleaning vs. penetration level for aluminum welding!

When aluminum welding, the positive (+) portion of the AC welding amperage cleans the oxides from the aluminum surface. The negative (-) portion delivers more heat input, increasing penetration level.



Patented AC Auto Balance® automatically sets the ratio of cleaning action (+) versus penetration (-) based on amperage.



Auto Balance® Results

RECOMMENDED ACCESSORIES TO EXPAND MACHINE CAPABILITIES

GENERAL OPTIONS

Undercarriage

Comes complete with single gas cylinder platform, bracket, and chain, to accommodate 6 in. to 9 in. (152 to 229 mm) diameter gas cylinders, from 24 in. to 56 in. (610 to 1422 mm) high. The undercarriage features a pivoting gas platform to easily load the bottle without lifting.
Order K964-1



TIG OPTIONS

Hand Amptrol™

Provides 25 ft. (7.6 m) of remote current control for TIG welding. (6 pin plug connection). Velcro straps secure torch.
Order K963-3 (One size fits all Pro-Torch TIG Torches.)



Foot Amptrol™

Provides 25 ft. (7.6 m) of remote output control for TIG welding. (6 pin plug connection).
Order K870



Arc Start Switch

May be used in place of the Foot or Hand Amptrol™. Comes with a 25 ft. (7.6 m) cable. Attaches to the TIG torch for convenient finger control to start and stop the weld cycle at the current set on the machine.
Order K814



Magnum® Pro-Torch™ TIG Torches

A full line of air-cooled and water-cooled torches and Twist Mate™ adapters are available.
Request publication E12.150.

Ultra-Flex™ PTA-9F TIG Torch Package

Includes a PTA-9F flex head torch with a 12.5 ft. (3.8 m) one-piece Ultra-Flex™ cable and K1622-1 Twist Mate™ adapter. Also includes a 1/16" (1.6 mm) tungsten, gas lens collet body, collet and gas lens.
Order K1781-9



Parts Kits

Parts kits are available for the PTA-9 and PTA-17 torches. These kits include back cap, collets, collet bodies nozzles and tungstens.
Order KP507 for PTA-9 torches
Order KP508 for PTA-17 torches.

Gas Lens Parts Kit for PTA-9 & PTW-20

Parts kit provides collets, collet bodies, a back cap, alumina nozzles and tungstens in a variety of sizes, all packaged in an easy to carry reclosable box.
Order KP2414-1

Cut Length Consumables

TIG welding filler metals are available for welding stainless steel, mild steel, aluminum and copper alloys.
See publication C9.10

See publication E12.150 for a full listing of TIG torches and torch expendable parts.

PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Output ⁽¹⁾ Current/Voltage/ Duty Cycle	Input Current @ Rated Output ⁽²⁾	Output Range	H x W x D in (mm)	Net Weight lbs (kg)
Square Wave™ TIG 175	K1478-5	208/230/1/60	150A/26V/25%	64/57A	DC: 10-175A AC: 10-175A Max. OCV: 59V DC Max. OCV: 74V AC	19.5 x 13.7 x 25.0 (495 x 348 x 635)	185 (84)

(1) Based on a 10 minute period. Additional ratings include: 110A/25V/60% and 90A/24V/100%. All ratings at 104°F (40°C).

(2) The National Electrical Code permits operation at rated output and duty cycle from a 50 amp receptacle when supply lines and fuses are properly sized. See Power Source operator's manual.

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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