

# Precision TIG<sup>®</sup> 225

## Processes

Stick, TIG

## Product Number

K2535-1 208/230/1/60 Ready-Pak<sup>®</sup>

K2535-2 208/230/1/60 Ready-Pak<sup>®</sup>  
with Cart

K2533-2 460/575/1/60 Machine Only

See back for more specs

## Input Power

208/230/1/60

460/575/1/60

## Input Current @ Rated Output

42/39A

## Rated Output

90A/23.4V/100% Duty Cycle

## Output Range

5-230 Amps AC

5-230 Amps DC

Max. OCV: 75V

## Weight/Dimensions (H x W x D)

192 lbs. (87 kg)

20.7 x 14.5 x 25.6 in.

(526 x 368 x 650 mm)

## The Power to Perform!<sup>SM</sup>

Professional features, like the most auxiliary power and the widest output range in its class, make the Precision TIG<sup>®</sup> 225 a great value.

## FEATURES

- ▶ **5-230 amps** is the widest welding range in its class.
- ▶ **Patented Micro-Start<sup>™</sup> II Technology** delivers extremely stable low amperage starting, welding and cratering for AC and DC welding.
- ▶ **FREE TIG Pulser** – Optimal heat input control results in reduced warping and burnthrough on thin materials and improved appearance.
- ▶ **Excellent Stick Welder** – even with Fleetweld<sup>®</sup> 5P (E6010).
- ▶ **AC Auto Balance<sup>®</sup>** automatically sets the optimal cleaning vs. penetration levels for great looking aluminum welds.
- ▶ **Standard NEMA 6-50 plug** on 9 ft. (2.7 m) input power cord with receptacle. (208/230 volt models only).
- ▶ **115 volt auxiliary power** receptacles with 20 amp service reliably powers water coolers or other tools (208/230V model only, all other models 6 amps).
- ▶ **Standard torch parts storage** compartment and cable hanger keeps you organized.
- ▶ **Ready-Pak<sup>®</sup> models** include a Pro-Torch<sup>®</sup> PTA-17 air-cooled 150 amp torch with 12.5 ft. (3.8 m) Ultra-Flex<sup>™</sup> cable.
- ▶ **Fan-As-Needed<sup>™</sup> (F.A.N.)** prevents overheating. F.A.N. reduces power consumption noise, motor wear and dust in the machine.
- ▶ **CSA C/US** certified.

## APPLICATIONS

- ▶ **Automotive/Motorsports**
- ▶ **Vocational Schools**
- ▶ **Home/Shop**
- ▶ **General Fabrication**



Shown:  
K2535-2 Ready-Pak<sup>®</sup> With Cart Pkg.

## WHAT'S INCLUDED

- ▶ Precision TIG<sup>®</sup> 225 (208/230/1/60)
- ▶ Torch Parts Storage Compartment
- ▶ Torch Hanger
- ▶ 10 ft. (3.0 m) Work Cable & Clamp
- ▶ Removable Lift Eye
- ▶ 9 ft. (2.7 m) Input Power Cord with NEMA 6-50P Plug
- ▶ NEMA 6-50R Receptacle
- ▶ TIG Procedure Guide
- ▶ GTAW (TIG) Handbook

## INPUT



## OUTPUT

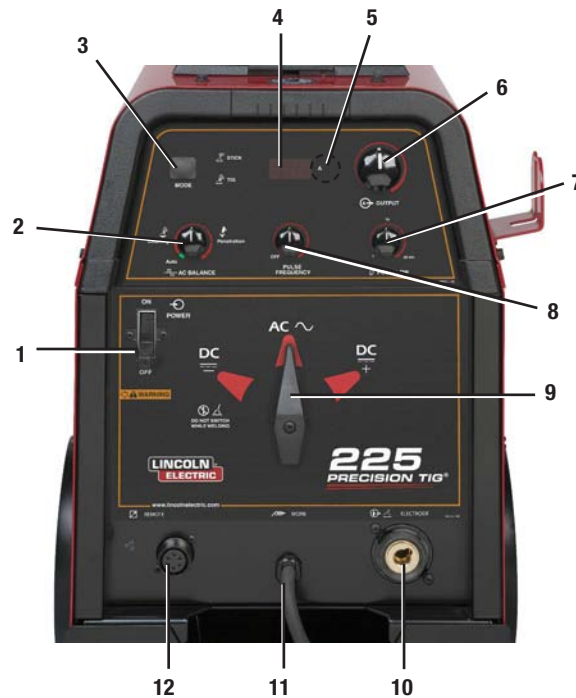


## THE LINCOLN ELECTRIC COMPANY

## KEY CONTROLS

- Large, well-spaced controls make it easy to view and set up with gloved hands.

- 1) Power Switch
- 2) AC Balance Control with Auto Balance® Setting
- 3) Mode Switch
- 4) Digital Amp Meter (Preset/Actual)
- 5) Thermal Shutdown Light (Back Lit)
- 6) Output Preset Control
- 7) Post Flow Time
- 8) Pulse Frequency Control and Pulse Rate Indicator Light
- 9) Polarity Switch
- 10) Twist-Mate™ Output Connector for TIG Torch or Electrode Cable for Stick Welding
- 11) Attached Work Cable
- 12) Remote Receptacle



## ARC PERFORMANCE

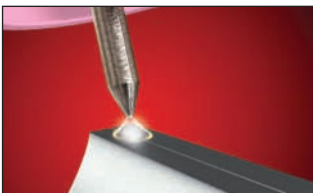
- Micro-Start™ II Technology — More than just a starting aid.**  
Better control for starting, arc stability and crater fill.

**MICRO-START™ II**  
TECHNOLOGY



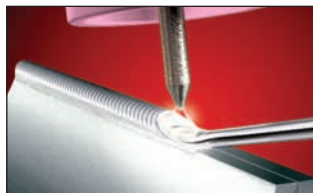
### Great Starting

Micro-Start™ II Technology minimizes high frequency and 'hot starts' to deliver soft arc starts without arc wandering for AC and DC welding.



### Stable, Focused Arc

Micro-Start™ II Technology aids arc stability THROUGHOUT THE WELD CYCLE – even at the lowest amperage!



### Precise Crater Fill

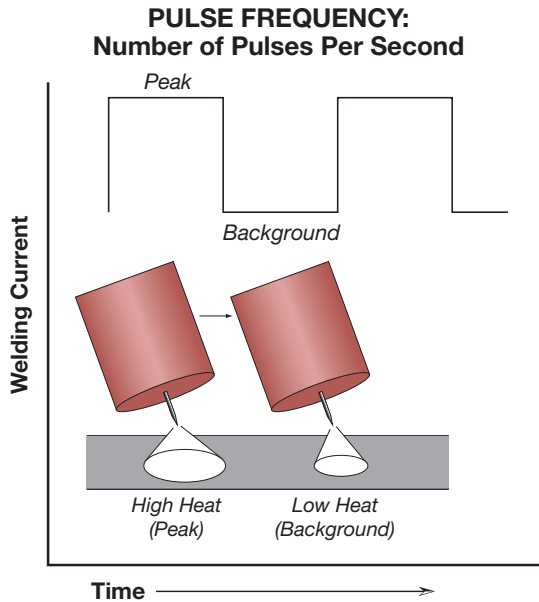
Micro-Start™ II Technology controlled ramp down helps precisely fill the weld crater for quality results.



**“Set It/See It” Pulse Control —  
Make attractive and consistent welds!**

**What Is It?**

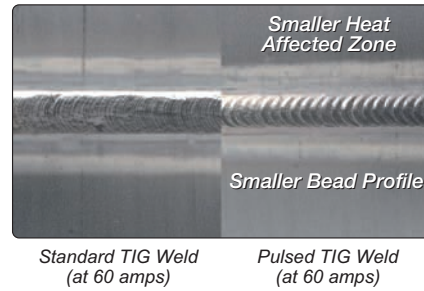
Pulse welding systems vary weld current between peak (high heat) and background current (low heat) levels. Adjusting the pulse frequency controls the level of heat input applied to the weld relative to the weld travel speed. For the Precision TIG® 225, pulse frequency can be varied from 0.1 to 20 pulses per second.



**Results**

Better control of heat input in the weld, resulting in:

- Reduced warping and burnthrough on thin materials.
- Smaller heat-affected zone.
- Smaller bead profile without compromising proper penetration.



**Great For**

- **Thin materials** – Faster pulse settings help to narrow the bead profile and minimize the heat-affected zone and resulting warping or burnthrough.
- **Consistent appearance** – Slower pulse settings aid in timing the application of filler metal to produce the consistent stacked bead appearance associated with high quality TIG welding.
- **Maintaining a steady welding rhythm.**



**Easy Operation:**

- Flashing indicator light lets you see the pulse rate before you strike an arc.

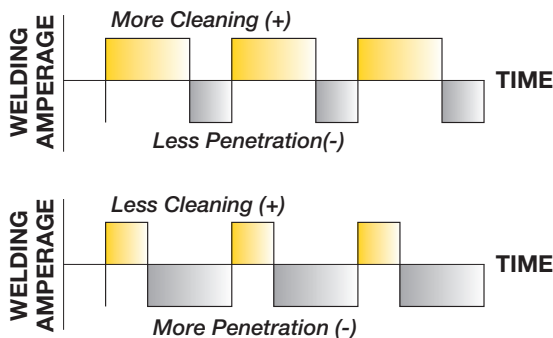
**AC Auto Balance® Controls —  
Automatically sets the optimal cleaning vs. penetration level for aluminum welding!**

**What Is It?**

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.

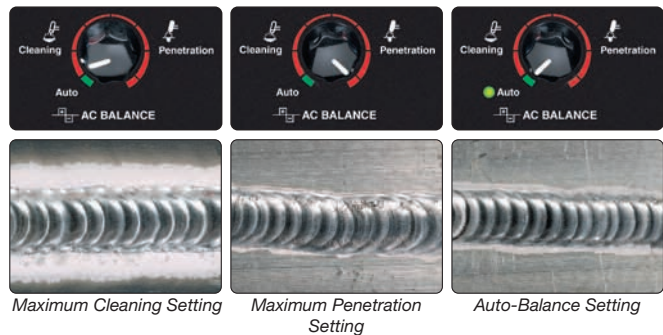
Patented AC Auto Balance® automatically sets the ratio of cleaning action (+) versus penetration (-) based on amperage.

Manual balance control provides the flexibility to customize the arc to your preference.



**Easy Operation:**

- Set it and forget it or override when you choose to customize the settings.



Don't miss these great convenience features!

**LINCOLN EXCLUSIVE!**



Torch Parts Storage Compartment



Torch / Cable / Helmet Holder



Hidden Pull Handle for Mobility on Undercarriage



Pro-Torch™ TIG Torch with Ultra-Flex™ Cable (Ready-Pak® models)

**LINCOLN EXCLUSIVE!**



Input Power Cord with Integral Power Plug and Receptacle included (208/230V models)



**FREE!**  
GTAW (TIG) Procedure Guide and Handbook



Shown:  
K2535-2 Ready-Pak® With Cart Package

Optional Understorage Cart adds these great features: (standard with K2535-2 Ready-Pak® With Cart Package)

**LINCOLN EXCLUSIVE!**



Personal Storage Drawer

Filler Rod Holders

Low Lift Shielding Gas Bottle Platform

**LINCOLN EXCLUSIVE!**  
**20 Amps**  
MORE POWER for BIGGER TOOLS



Portable MIG Welder



Welding Fume Extraction



Water Cooler



Grinders

## Ready-Pak® Packages

Take the hassle out of ordering. Order a Ready-Pak® pre-assembled welding package.

### Precision TIG® 225 Ready-Pak® Package

Includes:

- Precision TIG® 225 (208/230/1/60)
- Torch Parts Storage Compartment
- Torch Hanger
- 10 ft. (3.0 m) Work Cable & Clamp
- Removable Lift Eye
- 9 ft. (2.7 m) Input Power Cord with NEMA 6-50P Plug
- NEMA 6-50R Receptacle
- TIG Procedure Guide
- GTAW (TIG) Handbook
- PTA-17 One-Piece TIG Torch
  - 12 ft. (3.6 m) Ultra-Flex™ Cable
  - Twist-Mate™ Adapter
  - 3/32 in. (2.4 mm) 2% Thoriated Tungsten
  - Collet & Collet Body
  - 7/16 in. (11.1 mm) Alumina Nozzle
  - Long Back Cap
- Gas Regulator with Hose
- Foot Amptrol® (K870)

**Order K2535-1**



### Precision TIG® 225 Ready-Pak® with Cart Package

Includes everything in Ready-Pak® Package, plus:

- Understorage Cart

**Order K2535-2**



## Build Your Own Package

Do you need to customize your own package to fit your performance needs or budget? Here's everything you need to pick and choose the accessories you want.



1	2	3	4	5
<b>Select Precision TIG® 225 Machine</b>	<b>Optional Understorage Cart</b>	<b>Select Remote Control Device</b>	<b>Select TIG Torch Starter Pack</b>	<b>Select Water Cooler</b>
K2533-2 460/575/1/60 K2534-1 380/400-415/1/50/60	K2348-1	K870 Foot Amptrol® K963-3 Hand Amptrol® K814 Arc Start Switch	Air-Cooled Water-Cooled	N/A K1813-1 Cool Arc® 40 115V 50/60Hz K2187-1 Cool Arc® 40 230V 50/60Hz
			K2266-1 TIG-Mate™ 17 K2267-1 TIG-Mate™ 20	

## PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Precision TIG® 225 Ready-Pak® Pkg.	K2535-1	208/230/1/60	90A/23.4V/100%	42/39A	5-230 Amps AC 5-230 Amps DC Max. OCV: 75V	20.7 x 14.5 x 25.6 (526 x 368 x 650)	212 (96)
Precision TIG® 225 Ready-Pak® w/Cart Pkg.	K2535-2					31.2 x 19.8 x 38 (794 x 503 x 966)	258 (117)
Precision TIG® 225 Base Model	K2533-2	460/575/1/60		18/15A		20.7 x 14.5 x 25.6 (526 x 368 x 650)	192 (87)
	K2534-1	380/400-415/1/50/60		21/20A			

## RECOMMENDED ACCESSORIES TO EXPAND MACHINE CAPABILITIES



### GENERAL OPTIONS

#### Understorage Cart

Adds easy shop mobility and provides shielding gas bottle platform, handy storage drawer and two filler rod holders.  
**Order K2348-1**



#### Medium Canvas Cover

Protect your machine when not in use. Made from attractive red canvas that is flame retardant, mildew resistant and water repellent. Fits any POWER MIG® (without spool gun attached) or Precision TIG® 225 machine with undercarriage.  
**Order K2378-1**



### STICK OPTIONS

**Stick Electrode Holder & Cable**  
Includes Twist-Mate™ connector. 12.5 ft. (3.8 m) cable length.  
**Order K2374-1**



### TIG OPTIONS

#### TIG-Mate™ 17 Air-Cooled TIG Torch Starter Pack

Get everything you need for TIG welding in one complete easy-to-order kit packaged in its own portable carrying case. Includes: PTA-17 Ultra-Flex™ 12.5 ft. (3.8 m) torch, parts kit, Harris flowmeter/regulator, 10 ft. (3.0 m) gas hose, Twist-Mate™ adapter, and work clamp and cable.  
**Order K2266-1**



#### TIG-Mate™ 20 Water-Cooled TIG Torch Starter Pack

Get everything you need for TIG welding in one complete easy-to-order kit packaged in its own portable carrying case. Includes: PTW-20 12.5 ft. (3.8 m) torch, parts kit, Harris® flowmeter/regulator, 10 ft. (3.0 m) gas hose, Twist-Mate™ adapter, work clamp and cable and 10 ft. (3.0 m) water hose.  
**Order K2267-1**



#### Parts Kit for PTA-17 TIG Torch

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 sack.  
**Order KP508**



#### Parts Kit for PTW-18 and PTA-26 Torches

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 KP509**



#### Ultra-Flex™ PTA-9F TIG Torch Package

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



#### Ultra-Flex™ PTA-26 Torch Package

Includes a PTA-26 torch with a 12.5 ft. (3.8 m) 1 piece Ultra-Flex™ cable and K1622-3 Twist-Mate™ adapter. Also includes a 1/8 in. (3.2 mm) tungsten, collet body, collet and gas nozzle.  
**Order K1783-12**



#### 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.**



#### Foot Ampctrl®

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



#### Hand Ampctrl®

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.)



#### Arc Start Switch

Needed if an Ampctrl® is not used when TIG welding. Comes with a 25 ft. (7.6 m) cable. Attaches to the TIG torch for convenient finger control.  
**Order K814**



#### Cool-Arc™ 40 Water Cooler

Energy efficient long life cooler for water-cooled welding applications.  
**Order K1813-1** for 115V.  
**Order K2187-1** for 230V.

For best welding results with Lincoln Electric equipment, always use Lincoln Electric consumables. Visit [www.lincolnelectric.com](http://www.lincolnelectric.com) for more details.

### 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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**LINCOLN**  
**ELECTRIC**  
THE WELDING EXPERTS®