

# Precision TIG™ 275



## The Power To Perform!

This is the one you have been waiting for – The Precision TIG 275 is the mainstay in the next generation of the Square Wave family of machines. Patent-pending Micro-Start™ Technology provides unrivaled and revolutionary arc performance ideal for critical AC or DC welding in fabrication, aerospace, production, motorsports, and vocational applications. Available in both machine-only models or in a convenient Ready-To-Weld Package, the Precision TIG 275 combines both outstanding value-added features, with precision arc performance to meet all of your welding needs.

### Processes

Stick TIG

### Advantage Lincoln

- Patent pending Micro-Start™ technology for state-of-the-art low amperage starting: 2 amps DC, 5 amps AC.
- Smooth, controllable focused arc for precision TIG welding performance.
- Neat/organized cable management with integrated torch holster.
- Water-cooled torch connections with no adapters – side mounted to keep out of the way and protected.
- Built-in storage compartment with removable tray for torch consumables.
- Ready-To-Weld package available with under-cooler cart water cooler and storage drawer for helmet, gloves, foot pedal, and work cable/clamp.
- Built-in holders for filler rod tubes.
- Simple, easy to use controls.
- Energy-efficient design.
- Recommended for welding with E6010 and E7018 electrodes.
- CNC/Robotic capable.

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### Description



### Recommended Options

Advanced Control Panel, Undercarriage, Power Factor Kit, Work Clamp & Cable Assembly

### Recommended Stick Options

Stick Accessory Kit, Remote Output Control

### Recommended TIG Options

Pro-Torch TIG Torches, Pro-Torch Cable Adapters, Under-Cooler Cart Water Cooler, Water Solenoid Kit, Harris Argon Flowmeter Regulator, Foot Amptrol, Start Pedal Foot Amptrol, Hand Amptrol, Arc Start Switch

### Ready-To-Weld Package Includes

Precision TIG 275, Under-Cooler Cart Water Cooler, Foot Amptrol, Gas Regulator/Flowmeter & Hose Kit, PTW-20 Pro-Torch TIG Torch, Zippered Torch Cover, Parts Kit, Two Water Hoses, Work Cable & Clamp

### Order

K1826-1	Precision TIG 275	208/230/460/1/60
K1826-2	Precision TIG 275	460/575/1/60
K1827-1	Precision TIG 275	220-230/380-400/415/1/50/60
K1825-1	Precision TIG 275	208/230/460/1/60 (Ready-To-Weld Pkg.)



### Technical Specifications

Product Name	Product Number	Input Power	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	Dimensions H x W x D in.(mm)	Net Weight lbs.(kg)
Precision TIG 275	K1826-1	208/230/460/1/60	275A/31V/40%	80/72/36A with PFC 104/94/47A w/o PFC	DC: 2-340A AC: 5-340A Max. OCV: 75V	31 x 22 x 26 (787 x 559 x 660)	397 (180)
	K1826-2	460/575/1/60	275A/31V/40%	35/28A with PFC 47/38A w/o PFC			
	K1827-1	220-230/380-400/ 415/1/50/60	275A/31V/40%	80/46/43 with PFC 95/55/50 w/o PFC			
Precision TIG 275 Ready-To-Weld Package	K1825-1	208/230/460/1/60	275A/31V/40%	80/72/36A with PFC 104/94/47A w/o PFC	DC: 2-340A AC: 5-340A Max. OCV: 75V	49.7 x 28 x 41 (1262 x 711 x 1041)	641 (291)



## Advantage Lincoln con't.

- Optional Advanced Control Panel integrates TIG pulsing, downslope, arc force and trigger controls into the machine.
- Reliable under-cooler cart water cooler featuring industry recognized ProCon® pump tucked neat and tidy underneath machine for compact set-up.
- Optional power factor correction capacitors save on electricity cost when welding at higher currents.
- Separate output studs for work cable/clamp and electrode cable/holder allows you to quickly change between stick and TIG welding processes with no high frequency on stick studs.
- Easily accessible reconnect panel for convenient installation.
- CSA NRTL/C approved.
- Removable access door for easy spark gap maintenance.
- Reliable polarity switch with positive-locating detents.
- Minimum output control allows you to preset minimum amperage. Aids starting when using large tungstens. Also allows operator to control foot pedal resolution between minimum and maximum amperage.
- Fan-as-Needed™ (F.A.N.) minimizes thermal cycling of internal machine components, minimizes internal contamination when not welding, and saves on electricity costs.
- Automatically switched 115V auxiliary power receptacle runs water cooler only as needed. 50/60 Hz model also includes 230V auxiliary power receptacle.
- 3 year warranty on parts and labor.

## A Closer Look



- 1) Power Switch
- 2) Polarity Switch
- 3) Mode Switch
- 4) AC Balance Control
- 5) Local/Remote Current Control Switch
- 6) Maximum Output Preset Control
- 7) Minimum Output Preset Control & Display Switch (Also displays output voltage)
- 8) Digital Meter
- 9) Post Flow Time
- 10) Thermal Shutdown Light
- 11) Remote Receptacle (not shown)
- 12) Optional Advanced Control Panel
  - A) Trigger Switch (2-step/4-step)
  - B) Pulse Mode Switch
  - C) Pulse Frequency Control
  - D) Pulse % On Time Control
  - E) Pulse Background Current Control
  - F) Downslope Time

## Ready-To-Weld Package

### One Product Number (K1825-1) Gets You All This:

- Precision TIG 275 (208/230/460/1/60)
- Under-Cooler Cart Water Cooler
- Foot Amptrol
- Gas Regulator/Flowmeter & Hose Kit
- PTW-20 Pro-Torch™ TIG Torch (250 amp, 25ft.)
- Zippered Torch Cover
- Parts Kit
- Water Hose (2 included)
- 15 ft., 2/0 Work cable & clamp



## Recommended Options



### Advanced Control Panel

Provides 2/4-step trigger with adjustable Pulser controls and Downslope timer for TIG welding. Also includes adjustable Hot Start and Arc Force internal panel controls for stick welding, and other user selectable features.

**Order K1829-1.**

### Undercarriage

Includes a dual bottle rack with chain and front casters, rear wheels and a handle.

**Order K1869-1.**

### Power Factor Kit

Used to reduce current draw and keep electricity costs to a minimum when machine is routinely operated at high outputs.

**Order K1831-1.**

### Work Clamp & Cable Assembly

15 ft. 2/0 cable with 1/2" stud lug and work clamp.

**Order K2150-1.**



### Stick Accessory Kit

Complete kit for stick welding. Includes 30 ft. (9.1m) electrode cable, 25 ft. (7.6m) work cable, headshield, work clamp and electrode holder.

**Order K875 for 200 amps.**

**Order K704 for 400 amps.**



### Remote Output Control

Consists of a control box with choice of two cable lengths. Permits remote adjustment of output. 6 pin connection.

**Order K857 for 25 ft.**

**(7.6m) or K857-1 for 100 ft. (30.5m).**



### Magnum™ Pro-Torch™ TIG Torches

A full line of air-cooled and water-cooled torches available.

**Request publication E12.50.**



### PTA-26 One-Cable Adapter

Adapts the 7/8" PTA-26 fitting to the 5/8" gas and power connection on machine.

**Order K2166-1.**

### PTA-9, -17 One-Cable Adapter

Adapts the 3/8" PTA-8 or -17 to the 5/8" gas and power connection on machine.

**Order K2166-3.**

### PTA-9, -17, -26 Two-Cable Adapter

Converts the 7/8" water and power connection on the Precision TIG to a 1/2" output stud for use with a two-cable air-cooled TIG torch.

**Order K2166-2.**



### Under-Cooler Cart Water Cooler

Includes "cooler-in-a-drawer" with hoses and a lockable storage drawer on a dual bottle undercarriage.

**Order K1828-1.**



### Water Solenoid Kit

Enables use of tap or shop water for an economical water-cooled system. Not recommended for use in conjunction with a water cooler.

**Order K1830-1.**



### Harris Argon Flowmeter Regulator

Deluxe flowmeter/regulator. Includes 10 ft. hose.

**Order 3100211.**



### Foot Amptrol™

Varies current for making critical TIG welds. Depress pedal to increase current. Depressing pedal fully achieves maximum set current. Fully raising the pedal finishes the weld and starts the afterflow cycle. Includes 25 ft. control cable.

**Order K870.**



### Start Pedal Foot Amptrol™

Patent-pending design features an independent start pedal on control pedal providing two-stage foot action to easily feel start switch closure at minimum output level for enhanced arc start and crater-fill control. Provided with adjustable, or removable, heel stop and 25 ft. plug cable.

**Order K870-1.**



### Hand Amptrol

May be used in place of the Foot Amptrol. Fastens to the torch for convenient slide thumb control. Comes with a 25 ft. (7.6m) cable. Fully extend the slide forward to achieve maximum set current. Retract the slide to reduce the current. Returning to the start position finishes the weld and starts the afterflow cycle.

**Order K963-1**

**(For smaller handle 9, 17 or 20 series torches).**

**Order K963-2**

**(For larger handle 26 or 18 series torches).**



### Arc Start Switch

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

**Order K814.**

**Precision TIG™ 275 Order Form**



PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
PRECISION TIG 275 (208/230/460/1/60)	K1826-1		
PRECISION TIG 275 (460/575/1/60)	K1826-2		
PRECISION TIG 275 (220-230/380-400/415/1/50/60)	K1827-1		
<b>Ready-To-Weld Package</b>			
Precision TIG™ 275 (208/230/460/1/60)	K1825-1		
<b>Recommended Options</b>			
Advanced Control Panel	K1829-1		
Undercarriage	K1869-1		
Work Clamp & Cable Assembly	K2150-1		
Power Factor Kit	K1831-1		
<b>Recommended Stick Options</b>			
Stick Accessory Kit, 200 amps	K875		
400 amps	K704		
Remote Output Control, 25 ft.	K857		
100 ft.	K857-1		
<b>Recommended TIG Options</b>			
Pro-Torch Water-Cooled TIG Torches (No adapter required!)	see publication E12.150		
Pro-Torch Air-Cooled TIG Torches	see publication E12.150		
PTA-26 One-Cable Adapter	K2166-1		
PTA-9, -17 One-Cable Adapter	K2166-3		
PTA-9, -17, -26 Two-Cable Adapter	K2166-2		
Under-Cooler Cart Water Cooler	K1828-1		
Water Solenoid Kit	K1830-1		
Harris Argon Flowmeter Regulator	3100211		
Foot Amptrol	K870		
Start Pedal Foot Amptrol	K870-1		
Hand Amptrol (for -9, -17, -20 series torches)	K963-1		
(for -26, -18, series torches)	K963-2		
Arc Start Switch	K814		
	TOTAL:		

**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 advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying this type of fabrication methods and service requirements.



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