

Precision TIG[®] 275

Processes

Stick, TIG

Product Number

K2619-1

K2619-2

K2620-1

K2618-1 Ready-Pak[®] Package

See back for complete specs

Input Power (Voltage/Phase/Hertz)

K2619-1/K2618-1: 208/230/460/1/60

K2619-2: 460/575/1/60

K2620-1: 220-230/380-400/415/1/50/60

Input Current at Rated Output

208V: 104 460V: 47

220-230V: 95 575V: 38

230V: 94

380-400V: 55

415V: 50

Rated Output: Current/Voltage/Duty Cycle
275A/31V/40%

Weight/Dimensions (H x W x D)
397 lbs. (180 kg)

31 x 22 x 26 in.
(787 x 559 x 660 mm)

The Power To Perform!SM

With Micro-Start[™] II Technology and our new and improved AC Auto Balance[®] on board, the Precision TIG[®] 275 delivers unrivaled starting and welding at low amperages and improved AC aluminum welding performance.

FEATURES

- ▶ **Patented Micro-Start[™] II Technology** - Delivers extremely stable low amperage starting, welding and cratering for both AC and DC welding.
- ▶ **AC Auto Balance[®]** - Automatically sets the optimal cleaning vs. penetration levels for great looking aluminum welds.
- ▶ **High duty cycles** - 275 amps at 40% duty cycle.
- ▶ **Widest output range in its class** - 2-340 amps for both AC and DC.
- ▶ **Add an optional Under-Cooler Cart** - For extra storage and water-cooled applications.
- ▶ **Built-in storage compartment** - With removeable tray for torch consumables.
- ▶ **Excellent stick welder** - Even with Fleetweld[®] 5P (E6010) with new Automatic Hot Start[™] and Auto Adaptive Arc Force[™] controls.
- ▶ **115 volt auxiliary power receptacles** - Great for powering an optional water cooler or power tools.
- ▶ **Water-cooled torch connections with no adapters required** - Side mounted, out of the way, and well protected.

APPLICATIONS

- ▶ Fabrication
- ▶ Aerospace
- ▶ Production
- ▶ Motorsports
- ▶ Vocational Education



Shown K2619-1

WHAT'S INCLUDED

Ready-Pak[®] K2618-1 Includes:

- ▶ Precision TIG[®] 275 (208/230/460/1/60) – K2619-1
- ▶ Under-Cooler Cart Water Cooler – K1828-1
- ▶ Foot Amptrol[™] – K870
- ▶ Gas Regulator/Flowmeter and 10 ft. (3.0 m) Hose Kit – 3100211
- ▶ PTW-20 Pro-Torch[™] TIG Torch (250 amp, 25 ft.) – K1784-4
- ▶ Zippered Torch Cover – K918-2
- ▶ Parts Kit – KP510
- ▶ Water Hose (2 included) – S19558-4
- ▶ 15 ft. (4.5 m), 2/0 Work Cable and Clamp – K2150-1
- ▶ Adapter for optional PTA-9 or -17 Torch (3/8 in.) – S20403-4

INPUT



OUTPUT



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



THE LINCOLN ELECTRIC COMPANY

Arc Performance

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



Great Starting Stable, Focused Arc Precise Crater Fill

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



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



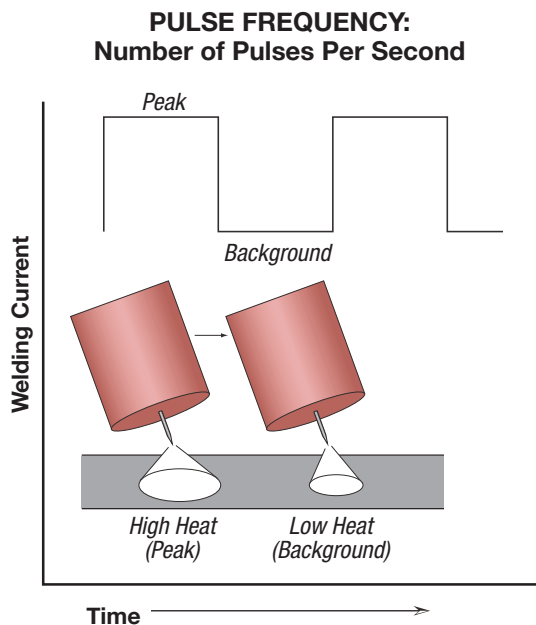
Micro-Start™ II Technology controlled ramp down helps precisely fill the weld crater for quality results.



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

What Is It?

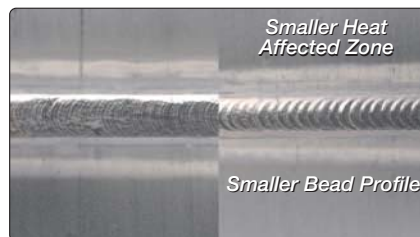
Pulse welding systems vary weld current between peak (high heat) and background current (low heat) levels. Adjusting the pulse frequency controls the level of heat input applied to the weld relative to the weld travel speed.



Results

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

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



Standard TIG Weld (at 60 amps)

Pulsed TIG Weld (at 60 amps)

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 “Set It/See It” Operation:

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



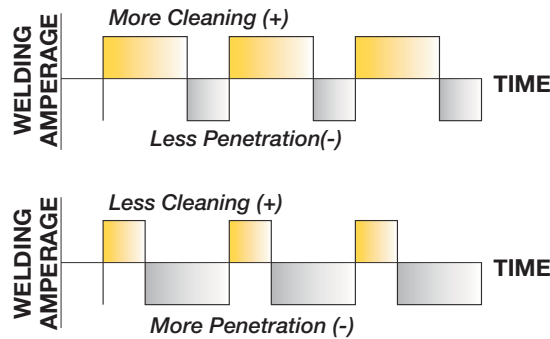
AC Auto Balance® Controls —
Automatically sets the optimal cleaning vs. penetration level for aluminum welding!

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.

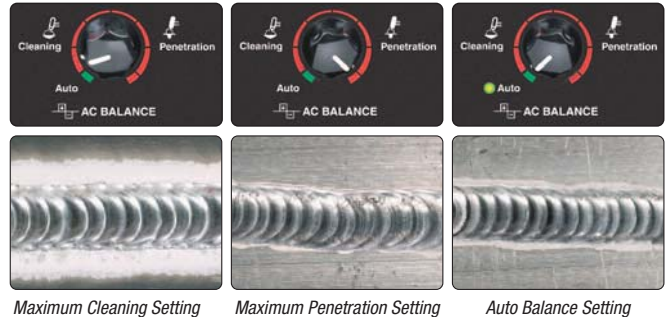
Patented AC Auto Balance® automatically sets the ratio of cleaning action (+) versus penetration (-) based on amperage.

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



Easy Operation:

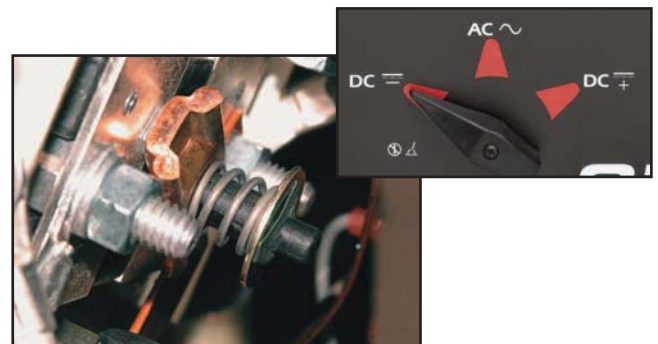
- Set it and forget it or override when you choose to customize the settings.



- Fan-As-Needed (F.A.N.)™ minimizes repeated heating and cooling of internal components, keeps dust and dirt build-up to a minimum and saves on electricity costs.
- Engineered cooling air routing brings clean air in from the top and exhausts at the bottom to draw and collect less dirt in the machine.
- Compare these reliability enhancing design features:
 - Crimped and soldered power connections.
 - Wound and varnished electrical coils do not require coil spacers used on competitive models.
 - Locking tabs on PC board connectors eliminates loose connections.
- Tough testing cycles ensure long service — dropping, jerking, rolling, shipping, vibration, resistance to real world extreme conditions, and extended in-service life testing.
- CSA C/US certified.
- Lincoln three-year warranty on parts and labor.



Clean, cool air route shown.



Snap-action durable switches make positive mechanical contact to reduce chances of intermittent contact failure.



Torch Parts Storage Compartment.



Optional TIG pulsing helps you make great welds.



Easily accessible input voltage reconnect panel.



Water-cooled torch connections with no adapters — side mounted to keep out of the way and protected.



Separate output studs for stick and TIG keep both stick electrode holder and TIG torch connected at the same time — eliminates set-up changeover when switching processes.



Shown: K2618-1 Water-Cooled Ready-Pak® Package



Neat/organized cable management with integrated torch holster.

Optional Features:
(standard with K2618-1 Water-Cooled Ready-Pak® Package)



*Lockable Undercarriage Storage and Water Cooler Drawers.
Reliable Pro-Con Pump.*



Low-Lift™ Shielding Gas Bottle Platform.

KEY CONTROLS

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

- A) Minimum Output Control & Display Switch
(Also displays output voltage)
- B) Set-Up Menu (see below)
- C) Digital Meter
- D) Local/Remote Current Control Switch
- E) Maximum Output Control
- F) Post Flow Time
- G) Thermal Shutdown Light
- H) Optional Advanced Control Panel
 - 1) Trigger Switch (2-step/4-step)
 - 2) Pulse/Spot Time Mode Switch
 - 3) Pulse Frequency Control
 - 4) Pulse % On Time Control
 - 5) Pulse Background Current Control
 - 6) Downslope Time, In Seconds
 - 7) Spot Time
- I) Polarity Switch
- J) Power Switch
- K) AC Balance Control
- L) Mode Switch



SET-UP MENU

Press and hold the menu button to display up to seven programmable parameters. The setting of the desired level is displayed, and increasing or decreasing the level setting is easy.

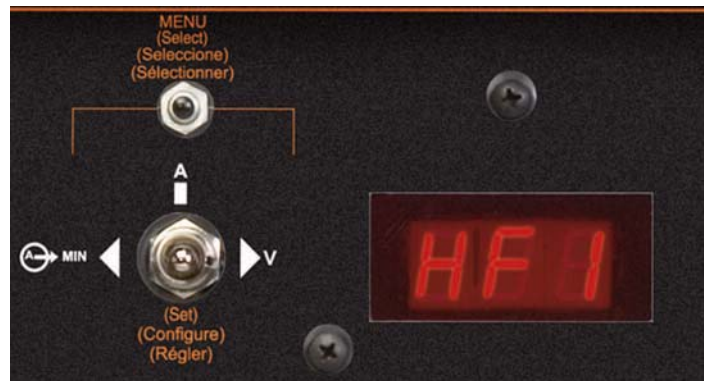
The Set-Up Menu includes:

Standard

- DC TIG Start Modes: High Frequency, Scratch Start, and Touch Start TIG®.
- Adjustable Preflow Time.
- Adjustable Start Pulse for Soft or Forceful Starts.

With Optional Advanced Control Panel

- Adjustable TIG Hot Start.
- Adjustable Upslope Time.
- Adjustable Stick Hot Start.
- Adjustable Stick Arc Force.



RECOMMENDED ACCESSORIES TO EXPAND MACHINE CAPABILITIES

GENERAL 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 K2621-1



Accessory Kit

For stick welding. Includes 20 ft. (6.1 m) #6 electrode cable with lug, 15 ft. (4.6 m) #6 work cable with lugs, headshield, filter plate, work clamp, electrode holder and sample pack of mild steel electrode. 150 amp capacity.

Order K875



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. (7.6 m) control cable. 6-pin plug connection.

Order K870



Under-Cooler Cart Water Cooler

Includes "cooler-in-a-drawer" with hoses and a lockable storage drawer on a dual bottle undercarriage. Two gallon (7.5 lbs.) capacity.

Order K1828-1



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. (7.6 m)

Order K857-1 for 100 ft. (30.5 m)



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.)



Undercarriage

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

Order K1869-1



TIG OPTIONS

Magnum® Pro-Torch™

TIG Torches

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

Request publication E12.150



Arc Start Switch

Needed if an Amptrol™ is not used when TIG welding. Comes with a 25 ft. (7.6 m) cable. Attaches to the TIG torch for convenient finger control. 6-pin plug connection.

Order K814



Harris® Argon Flowmeter Regulator

Deluxe flowmeter/regulator. Includes 10 ft. (3.0 m) hose.

Order 3100211



PTA-26 One-Cable Adapter

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

Order K2166-1



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

Order K2150-1



PTA-9, -17 One-Cable Adapter

Adapts the 3/8 in. PTA-9 or -17 fitting to the 5/8 in. gas and power connection on machine.

Order K2166-3



Cut Length Consumables

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

See publication C1.10



STICK OPTIONS

Accessory Kit

For stick welding. Includes 35 ft. (10.7 m) 2/0 electrode cable with lug, 30 ft. (9.1 m) 2/0 work cable with lugs, headshield, filter plate, work clamp and electrode holder. 400 amp capacity.

Order K704



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

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

Order K2166-2

PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Output Current/Voltage/Duty Cycle (104°F, 40°C)	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Precision TIG® 275	K2619-1	208/230/460/1/60	275A/31V/40%	104/94/47A	DC: 2-340A AC: 2-340A Max. OCV: 75V	31 x 22 x 26 (787 x 559 x 660)	397 (180)
	K2619-2	460/575/1/60	275A/31V/40%	47/38A			
	K2620-1	220-230/380-400/415/1/50/60	275A/31V/40%	95/55/50A			
Precision TIG® 275 Ready-Pak® Package	K2618-1	208/230/460/1/60	275A/31V/40%	104/94/47A		49.7 x 28 x 41 (1262 x 711 x 1041)	641 (291)

For best welding results with Lincoln Electric equipment, always use Lincoln Electric consumables. Visit 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.

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 these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

LINCOLN®
ELECTRIC
THE WELDING EXPERTS®