

Precision TIG[®] 225

The Power to Perform![™]



Check Under The Hood!

Compare Lincoln Electric's Precision TIG[®] 225
to Miller Electric's[®] Syncrowave[®] 200

PRECISION TIG[®] 225



Shown:
Ready-Pak[®] w/Cart Pkg.
(Stocking Number: K2535-2)

SYNCROWAVE[®] 200



Shown:
Runner[™] Pkg.
(Stocking Number: 907308011)

Input Power Cable, Plug and Receptacle



- Lincoln Electric 208/230 models include a thick #6 diameter cable with an integrated 6-50P plug and matching 6-50R receptacle for your shop wall.



- Miller[®] models feature a smaller diameter #8 input power cable terminating with bare wires. This requires the after-sale purchase of proper plugs and user or third party installation.

Foot Amperage Control Construction



- Wide base for added stability.
- Low profile is more comfortable to use.
- Strain Relief protects control cable.
- Metal MS-Type connector is made for rugged use.
- Metal case designed for rugged use.

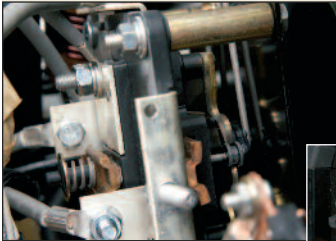


- Narrow base tips more easily.
- Steep angle strains muscles when used for long periods of time.
- No strain relief is used to protect the control cable.
- Plastic connector can be more susceptible to damage.

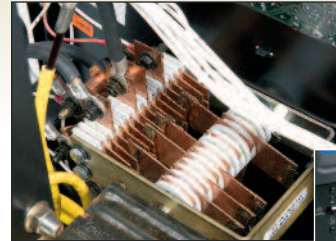
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Polarity and Power Switches



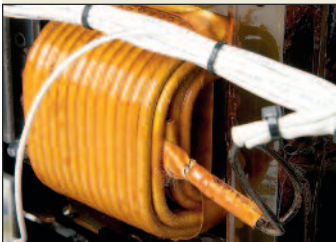
- Heavy duty Snap-Action[™] polarity switch is spring loaded to lock into position.
- Design ensures positive electrical contact.
- Heavy duty industrial power switch has a similar positive snap action feel.



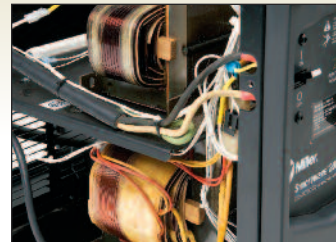
- Older knife switch design does not positively lock into position.
- Can be accidentally set to a position that causes intermittent electrical contact that can arc and burn.
- Smaller power switch does not positively lock into position.



Choke and Transformer Spacers

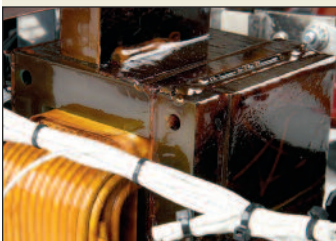


- Coils wound and varnished without wooden spacers remain secure for long service life.

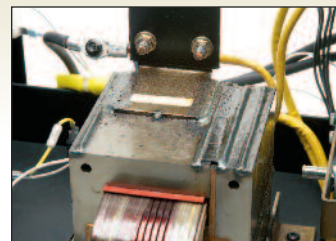


- Wooden spacers swell in high moisture conditions and shrink as they dry out, which eventually may cause loose windings.

Varnish Insulation



- Triple dip varnish and Nomex[®] insulation result in a class H insulation rating certified to 180°C (356°F).

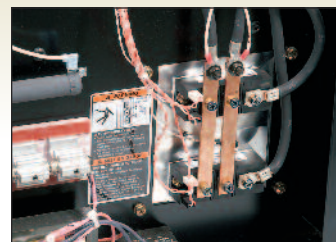


- Insulation rating is unknown.

Rectifier Cooling



- Large aluminum heat sink plates are in the direct fan path for effective cooling and better thermal dissipation.



- Smaller rectifier design is placed at the bottom of the machine, resulting in less effective cooling.

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Shielding Gas Solenoid

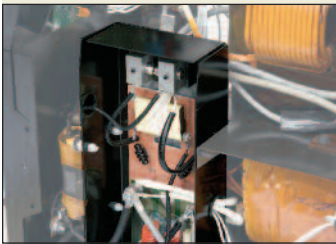


- More expensive 100% brass solenoid is used for long life.

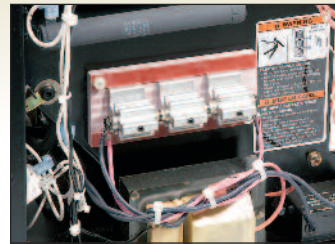


- Less expensive plastic solenoid housing may crack and leak over time.

Spark Gap Access



- Enclosed high frequency spark gap is shielded from the air flow in the machine to minimize dirt and dust that affect performance.

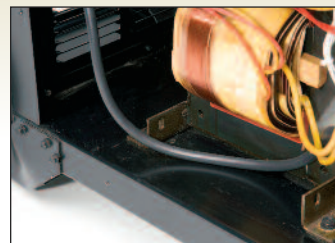


- High frequency spark gap is minimally protected from dust circulating throughout the machine, resulting in the need for more frequent cleaning and maintenance.

Power and Gas Line Protection

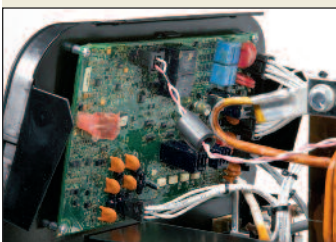


- Attention to assembly details includes wrapped control leads that are additionally sleeved and secured by tie wraps to prevent abrasion during extended use.

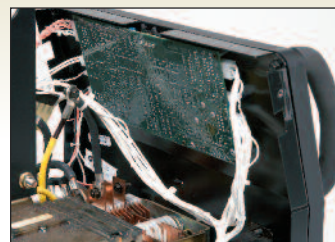


- Power and Gas lines are not sleeved or secured and frequently are left to run over sharp sheet metal edges that can damage these leads over time, which may cause operational and reliability concerns.

PC Boards



- Lincoln Electric PC Boards receive some of the toughest protection in the industry, including extensive dipping or potting to seal from the environment and locking tabs for key connections to eliminate loosening that can cause electrical failure.



- Sealant is less extensive and locking tabs are not used.

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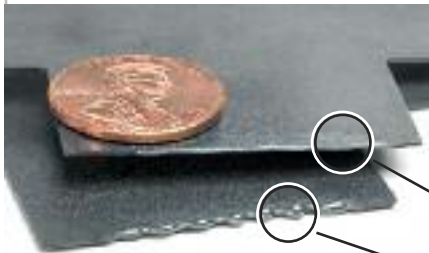


FEATURE	PRECISION TIG [®] 225	SYNCROWAVE [®] 200	ADVANTAGE LINCOLN
APPLICATION			
More Welding Power (Amperage Range)	5-230	5-200	Weld thicker material, especially useful in stick welding mode.
Micro-Start [™] II	✓ YES!	✗ NO!	This engineered arc enhancement aids starting, arc focus and stability and crater fill – throughout the weld cycle.
EASY TO USE			
Micro-Start [™] II	✓ YES!	✗ NO!	Lincoln Electric's Micro-Start [™] II is always on – no matching to your application, no hidden menus to set.
AC Auto-Balance [™]	✓ YES!	✗ NO!	Automatically sets the optimal cleaning vs. penetration level for great looking aluminum welds.
Visual Pulse Control	✓ YES!	✗ NO!	Easily “Set It/See It” with Lincoln. The flashing light lets you see the pulse rate before you strike an arc.
PROFESSIONAL FEATURES			
More Auxiliary Power	115v 20 amps	115v 15 amps	20 amps allows you to power bigger industrial tools, including a compact MIG welder.
Heavy Input Power Cord, Standard Power Plug and Receptacle	✓ YES!	✗ NO!	9 ft. input power cord in a #6 diameter size with integrated 6-50P power plug and also 6-50R power receptacle for mounting in your shop.
Top-Mounted Torch Parts Storage	✓ YES!	✗ NO!	Store your torch tungstens, collets and other parts here.
Footpedal/Helmet/Other Storage	✓ YES!	✗ NO!	Stow your footpedal and ground clamp when moving around the shop or your helmet, gloves and other gear.
Top Quality Accessories	✓ YES!	✓ YES!	Lincoln features a tough Harris [®] flowmeter/regulator and professional 150 amp air-cooled TIG torch with Ultra-Flex [™] cable.
SPECS			
Rated Output	90A/24V @ 100% Duty Cycle	150A/26V @ 40% Duty Cycle	Weld all day on typical applications.
Required Input Current at Rated Output	39A	54A	Check local electrical codes carefully when specifying input power requirements.
Dimensions: H x W x D in. (cm)	20.7 x 14.5 x 25.6 (526 x 368 x 650)	30.125 x 21.125 x 21.5 (765 x 537 x 546)	Compact size and smaller shop footprint saves space while packing more power and superior features.

Take the TIG challenge

- Check out what's included with the Precision TIG® 225
- and what's missing from the Diversion™ 165

Micro-Start™ II Technology! **Lincoln Yes!**
 Miller No!



with
Micro-Start™ II
without
Micro-Start™ II

Start better, weld better, weld easier!

AC Auto-Balance® Control **Lincoln Yes!**
 Miller No!

Automatically sets the optimal cleaning vs. penetration level for aluminum welding based on amperage!

Let the machine do the work or customize your own balance.



Auto-Balance
Setting

With Fixed Balance you're stuck with either too much cleaning or too much penetration.

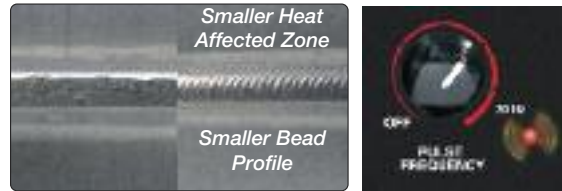
Don't outgrow your investment

More Welding Power! **Lincoln Yes!**
5-230 Amps vs. 10-165 Amps **Miller No!**



Built-in TIG Pulser **Lincoln Yes!**
 Miller No!

Great training tool!
Make better looking welds!
Great for heat control on thin material!



Standard TIG Weld (at 60 amps) Pulsed TIG Weld (at 60 amps)

Foot Pedal Included **Lincoln Yes!**
 Miller No!



Easiest way to TIG weld.
Nothing extra to buy!

Stick Mode **Lincoln Yes!**
 Miller No!



Weld more processes. It's like getting a stick machine for free!

Adjustable Post Flow **Lincoln Yes!**
 Miller No!



One setting doesn't fit all. Save gas and protect your weld.



Precision TIG® 225 vs. Diversion™ 165

Make the Smart Choice. Choose Lincoln!



Precision TIG® 225 vs. Diversion™ 165

PRODUCT COMPARISON

Feature	Precision TIG® 225	Diversion™ 165	Lincoln Advantage
TIG Torch Connection	Detachable Twist-Mate™	Permanently attached	<ul style="list-style-type: none"> Easily change TIG torch size or type. Does not require a Service Shop to replace a worn torch.
Welding Modes	AC/DC TIG, Stick	AC/DC TIG only	<ul style="list-style-type: none"> Excellent TIG and Stick welding output on a wide variety of electrodes, even E6010. Why buy only TIG capability when you can get stick for free?
Remote Foot Amperage Control	Foot Amptrol® included with machine	Foot pedal optional	<ul style="list-style-type: none"> Foot pedal control is the easiest way to TIG weld successfully. No need to spend an additional \$150 for a foot pedal.
Arc Start	Micro-Start™ II provides a smooth, stable start with minimal high frequency	Machine starts with excessive hot start and high frequency	<ul style="list-style-type: none"> Focused arc and concentrated heat input for less burnthrough and easy puddle formation on thin materials.
AC Arc Stability	Micro-Start™ II delivers focused, quiet and stable arc	Loud unstable arc	<ul style="list-style-type: none"> More heat control for clean and consistent TIG welds. Easier to make great looking professional welds.
Gas Post-Flow Time	Adjustable	Fixed	<ul style="list-style-type: none"> Adjust post-flow time depending on application. Minimizes gas waste and maximizes crater protection.
AC Balance Control	AC Auto-Balance® or manually adjustable	Fixed, non-adjustable	<ul style="list-style-type: none"> AC Auto-Balance® allows great looking welds without a lengthy set-up. It automatically adjusts the level of cleaning vs. penetration based on the welding amperage. You can also override the automatic setting for increased cleaning action or weld penetration. Fixed balance does not allow you to adjust the arc, making it difficult to obtain the customized welding results you want.
TIG Pulse Welding	Built-in	Not available	<ul style="list-style-type: none"> Pulse welding is great for controlling the welding heat input on thin materials. Use the pulsing arc as a guide when adding filler metal for consistent stacked dime appearance.
Output Range	5-230 Amps	10-165 Amps	<ul style="list-style-type: none"> A lower end with great arc stability allows you to weld thin material. A higher output range means you can weld thicker material exceeding 3/16" aluminum. Output range meets a variety of application needs.
Value	\$\$\$ 	\$\$ 	<ul style="list-style-type: none"> Investing in Lincoln delivers more value by welding more processes, welding thicker and thinner material. It is easier to use and one that won't be outgrown by your welding needs. It might be the last welding machine you'll need to buy!