

Invertec® V205-T AC/DC

For TIG and Stick Welding

The Invertec V205-T AC/DC is a compact, TIG power source intended for critical AC or DC TIG welding. From maintenance to production fabrication, to motorsports, aerospace, nuclear piping and shipbuilding, this feature-packed inverter is flexible enough for almost any job! Variable AC frequency allows you to focus the arc when precise control is required. The 115/230V input voltage auto-reconnect makes the V205-T AC/DC extremely useful almost anywhere in the shop or in the field.



Processes

Stick TIG

Advantage Lincoln

- Most economically priced TIG welder in its class, with full TIG control – up to 11 variables – including full-featured pulse, downslope, upslope and balance control.
- Lincoln's first AC/DC inverter for TIG with advanced inverter technology to optimize arc performance.
- 150 amps 115 volts, 200 amps 230 volts @ 40% duty cycle is the highest output rating in this machine class.
- Selectable high frequency TIG starting for easy arc ignition or Touch-Start™ TIG starting capability on DC for areas where high frequency emissions are a concern.
- Ability to adjust AC output frequency gives the operator maximum arc control for critical welds, minimizing the heat affected zone.
- High quality stick welding with such popular Lincoln electrodes as Fleetweld® 35, 37, 180 and Excalibur® 7018.
- Auto-reconnects for single phase 115/230V 50/60 Hz input power makes for fool-proof on-site connection.
- Weighs in at a mere 38 lbs. (17.3 kg) making it easy to carry around the shop or job site.
- Three-year warranty on parts and labor.

Description

Output   Input  

Recommended General Options

NEW! TIG-Mate™ 17 Air-Cooled TIG Torch Starter Pack, TIG-Mate 20 Water-Cooled TIG Torch Starter Pack, Pro-Torch™ TIG Torch, Foot Amptrol®, Hand Amptrol, Arc Start Switch, Cool Arc 40 Water Cooler, Cut Length Consumables

Unit Includes

- 230V Input cord and plug (10 ft.)
- Twist-Mate Torch Adapter for PTA-9 or 17 one-piece torch.
- Twist-Mate adapter for work cable
- Fully adjustable shoulder strap

Order

K1855-1 Invertec V205-T AC/DC 115/230V/1/50/60
K2350-1 Invertec V205-T AC/DC One-Pak™ Package

TECHNICAL SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output ⁽¹⁾	Output Range	Dimensions H x W x D inches (mm)	Net Weight lbs. (kg)
Invertec V205-T AC/DC	K1855-1	115V/1/50/60	150A/16.0V/40% TIG	34.0A	6-200 A AC/DC Max. OCV: 53.7	15.0 x 8.5 x 19.0 (381 x 216 x 483)	38 (17.3)
			120A/14.8V/60% TIG	25.0A			
			100A/14.0V/100% TIG	20.0A			
		230V/1/50/60	200A/18.0V/40% TIG	30.0A			
			170A/16.0V/60% TIG	18.0A			
		115V/1/50/60	140A/15.6V/100% TIG	15.0A			
			110A/24.4V/35% Stick	34.0A			
			90A/23.6V/60% Stick	28.0A			
230V/1/50/60	70A/22.8V/100% Stick	20.0A					
	180A/27.2V/35% Stick	30.0A					
		150A/26.0V/60% Stick	23.0A				
		130A/25.2V/100% Stick	19.0A				

(1) Input amps on 60Hz input.

PERFORMANCE

TIG Welding

The ability to adjust Invertec V205-T AC/DC's output frequency allows the operator to control the focus of the arc. This is ideal for critical welds if trying to minimize the heat affected zone in the weld. It is also a benefit for welding on cast aluminum where lower frequency is desired to minimize agitation of impurities in the base metal.

High frequency on start only in AC mode to minimize high frequency emissions.

Stick Welding

The Invertec V205-T AC/DC is also capable of high quality stick welding with such popular Lincoln electrodes such as Fleetweld® 35, Fleetweld 37, Fleetweld 180 and Excalibur™ 7018.

FEATURES

- Selectable high frequency TIG starting for easy arc ignition or Touch-Start DC TIG starting for areas where high frequency emissions are a concern.
- Hidden start up menu offers the following additional controls:
 - Preflow time for purging gas lines is adjustable between 0 and 25 seconds. Factory preset at 0.5 seconds.
 - Adjustable waveform. Factory default is Square Wave. Sinusoidal and Triangular may also be selected.

- High frequency is standard starting method for TIG. Touch-Start TIG may be selected for DC.
- Adjustable Arc Force for stick mode only.
- Adjustable Hot Start for stick mode only.
- Adjustable Start Power for larger diameter tungsten.

Key Controls

- | | |
|-------------------------------|--|
| 1) Weld Mode | 12) Digital output current display |
| 2) Up-Slope Time | 13) 2-Step and 4-Step operation modes |
| 3) Pre-settable Amperage | 14) Local/Remote switch allows for remote current controls in TIG welding mode |
| 4) Down-Slope Time | 15) 6-pin MS-Type remote connector |
| 5) Finish Current | 16) Integral Twist-Mate gas and power connections |
| 6) AC Welding Frequency | 17) Starting Current |
| 7) AC Balance | |
| 8) Pulse Frequency | |
| 9) Pulse Background Current | |
| 10) % On-Time Pulse | |
| 11) Adjustable post-flow time | |



QUALITY AND RELIABILITY

- Thermal and voltage overload protection for long life of internal components.
- Three year warranty on parts and labor.
- Line voltage compensation gives you the option to use remote generator power.

SYSTEM SELECTION

One-Pak™ Welding Packages

Order a Lincoln One-Pak and get everything you need to complete a welding package – all with one order number. Just add shielding gas. **(Packages are not assembled).**

Invertec® V205-T AC/DC One-Pak™ Package — One product number (K2350-1) gets you all this:

UNASSEMBLED Package Contains

- Invertec V205-T AC/DC (115/230/1/50/60) . . . K1855-1
- TIG-Mate 17 Air-Cooled K2266-1
TIG Torch Starter Pack
- Foot Amptrol® K870



GENERAL 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 torch, parts kit, Harris flowmeter/regulator, 10 ft. gas hose, PTA-17 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 torch, parts kit, Harris flowmeter/regulator, 10 ft. gas hose, PTW-20 Twist-Mate™ adapter, work clamp and cable and 10 ft. water hose.
Order K2267-1

Additional or alternate torches may be ordered:



Pro-Torch™ TIG Torches
 One-piece air-cooled PTA-9 or -17 TIG torches may be connected directly with the included K1622-1 TIG Torch Adapter.
Order K1781-1 for PTA-9, 12.5 ft., 1-cable.
Order K1782-1 for PTA-17, 12.5 ft., 1-cable.

One-piece air-cooled PTA-26 TIG torches may be connected with an optional K1622-3 Twist-Mate™ adapter.
Order K1783-1 for PTA-26, 12.5 ft., 1-cable.
Order K1622-3 PTA-26 adapter

PTW-20 water-cooled torch may be connected with an optional K1622-4 Twist-Mate adapter.
Order K1784-3 for PTW-20, 12.5 ft.
Order K1622-4 PTW-20 adapter

A full line of TIG torches in various lengths and types are available.
Request Lincoln Publication E12.150 for more information.



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



Hand Amptrol
 Provides 25 ft. (7.6m) of remote current control for TIG welding. (6 pin plug connection)
Order K963-1 for PTA-9, PTA-17, PTW-20 TIG Torches.
Order K963-2 for PTA-26, PTW-18 TIG Torches.



Arc Start Switch
 May be used in place of the Foot or Hand Amptrol. Comes with a 25 ft. (7.6m) cable and 6-pin plug connector. 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



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.



Cut Length Consumables
 TIG welding filler metals are available for welding stainless steel, mild steel, aluminum and copper alloys.
Request Lincoln Publication C9.10 for more information

INVERTEC® V205-T AC/DC

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
Invertec V205-T AC/DC 115/230/1/50/60	K1855-1		
Invertec V205-T AC/DC One-Pak™ Package	K2350-1		
Recommended General Options			
TIG-Mate 17 Air-Cooled TIG Torch Starter Pack	K2266-1		
TIG-Mate 20 Water-Cooled TIG Torch Starter Pack	K2269-1		
Pro-Torch TIG Torches:	see publication E12.150		
PTA-9 TIG Torch, 12.5 ft., 1-cable, 125 amps	K1781-1		
PTA-17 TIG Torch, 12.5 ft., 1-cable, 150 amps	K1782-1		
TIG Torch Adapter (required for PTA-9, -17)	K1622-1		
PTA-26 TIG Torch, 12.5 ft., 1-cable, 200 amps	K1783-1		
TIG Torch Adapter (required for PTA-26)	K1622-3		
PTW-20 TIG Torch, 12.5 ft., 250 amps	K1784-3		
TIG Torch Adapter (required for PTW-20)	K1622-4		
Foot Amptrol	K870		
Hand Amptrol:			
For smaller handle 9, 17, or 20 series torches	K963-1		
For larger handle 26 or 18 series torches	K963-2		
Arc Start Switch	K814		
Cool Arc 40 Water Cooler:			
115/1/50/60	K1813-1		
220-240/1/50/60	K2187-1		
Cut Length Consumables	see publication C9.10		
	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 these types of fabrication methods and service requirements.

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