COMPACT. MULTI-PROCESS. EXCELLENT VALUE.

Vantage® 322

Shown:
Vantage® 322
(K2409-5)

KEY FEATURES

The quiet, compact Vantage® 322 is an ideal choice for construction teams, pipe rig owners and rental fleet managers.

- Stainless steel panels offer added durability
- Select one of five welding process modes
- Plenty of AC Generator power
- Tier 4 Final Kubota® diesel engine

Processes »
Stick, TIG, MIG, Flux-Cored, Gouging

Output »
CC CV | DC | 12.5 kW

Input »
Diesel

Product Number »
K2409-5

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LINCOLN® ELECTRIC

FEATURES

» **Compact Case With Stainless Steel Enclosure**

- Small size and light weight is suitable for many pickup trucks. Standard stainless steel roof, side panels and engine-access door deliver added protection and durability.

» **Multi-Process Welding, Separate Arc Gouge Mode**

- Select one of five Process Modes, including CC-stick up to 3/16 in. (4.8 mm), downhill pipe (for stick), DC Touch Start TIG®, CV-wire up to 5/64 in. (2.0 mm) or new arc gouging mode which maximizes output with up to 1/4 in. (6.3 mm) carbon rods.
- Digital weld meters included.

» **Plenty of AC Generator Power**

- 12.5 kW peak (11 kW continuous) 3-Phase 240V AC generator power. Will power industrial equipment such as a plasma cutter, pump or inverter welder.
- 11.5 kW peak (10 kW continuous) 1-phase AC generator power for common construction tools.

» **Industrial Diesel Engine**

- 4 cylinder 1800 RPM Kubota® diesel engine runs smooth and quiet. Standard engine gauges allow you to monitor performance at a glance.
- 20 gallon (76 liter) fuel tank for longer running time.

» **Innovative Service Access**

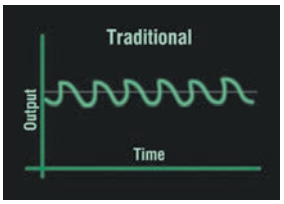
- Lockable, removable sliding engine access door provides ample space for engine and oil filter work without requiring a large clearance space on your truck. 55% more access than competitive product.
- Battery drawer on front of machine and top-mounted radiator cover provide convenient access to these systems. Patented tilt down control panel for easy servicing of internal components.

PERFORMANCE

Arc Performance

- 300 amps @ 100% duty cycle with output range up to 400 amps. All ratings are at temperatures of 104°F/40°C.

WHAT IS CHOPPER TECHNOLOGY®?



Traditional weld control is more variable around the desired output.

Chopper Technology delivers extremely fast response for tighter output control.

Patented and award-winning Lincoln Electric Chopper Technology® delivers superior DC arc welding performance for general purpose stick, downhill pipe, DC TIG, MIG, cored-wire and arc gouging.

Benefits of Chopper Technology include:

- Easy arc starting
- Low spatter levels
- Smooth arc action
- Excellent bead appearance

- Arc gouging with up to a 1/4 in. (6.3 mm) carbon. A separate arc gouging mode maximizes output.
- VRD™ (Voltage Reduction Device™) reduces OCV (open circuit voltage) in CC-stick welding mode for added safety.

WHAT IS VRD™?

The VRD provides additional safety in the CC-stick weld mode, especially when working in an environment with a higher risk of electrical shock such as wet areas and hot, humid, sweaty conditions. The VRD™ reduces the OCV at the welding output terminals while not welding to less than 30 volts DC.

The VRD is activated by flipping a toggle switch inside the machine to the "ON" position. Indicator lights monitor the voltage: green for less than 30 volts while not welding, and either red (greater than 30 volts) or green while welding, depending on the actual voltage of the arc.

Other weld modes when VRD is on:

Downhill Pipe	– There is no output.
CV-Wire	– OCV is not reduced.
Touch Start TIG	– No difference in operation. TIG is normally a low voltage (less than 30 volts) operation.

VRD portion of nameplate with green light on.

- CC-stick mode is optimized for general purpose stick using E7018 low hydrogen electrode.

PERFORMANCE

- Built-in "hot" start for easier starts and restrikes minimizing the electrode "sticking" to the work.
- Downhill pipe mode has arc force control for enhanced downhill pipe welding. The pipe mode is excellent for cellulosic electrodes and facilitates fast travel speeds, especially on fill passes. Adjust the arc force for a soft, buttery arc or a more forceful digging arc.
- Standard DC Touch Start TIG welding, not scratch start, for easy arc starting that avoids tungsten contamination and the need for high-frequency equipment.

WHAT IS TOUCH START TIG?

Touch Start TIG uses a very low voltage to sense when the tip of the tungsten electrode is touched to the work piece. When this occurs, a complete circuit is established. When the tungsten is then raised from the work piece, the circuit senses a change in voltage and initiates the appropriate welding current and voltage to support the TIG welding process.

Enjoy the added benefits of Lincoln Electric's Touch Start TIG when DC TIG welding. Not only do you avoid tungsten contamination when arc starting, but you also don't need extra high frequency equipment.

- Excellent CV wire welding with cored-wire and MIG (CO_2 and mixed gas).

Generator Performance

- 3-phase 240V AC generator power rated at 12.5 kW peak (11 kW continuous) output to power industrial equipment such as a plasma cutter, pump or inverter welder. Simultaneously weld and use 3-phase AC power – for example, up to 5,300 watts can be delivered while welding at 200 amps. Compare to competitive product which does not have 3-phase power.
- 3-phase 240V receptacle on control panel eliminates the need to hard-wire the connections.
- The Vantage 322 provides added value at the job site by delivering up to 11.5 kW peak (10 kW continuous) watts of 1-phase AC auxiliary power for equipment such as a Lincoln Electric plasma cutter. Also use for lights, grinders and other common construction tools. And, you can simultaneously weld and have access to AC power – 3,500 watts can be delivered while welding at 250 amps. Compare to competitive product which has no AC generator power at 225 amps welding and above.
- AC generator voltage is constant at 120V or 240V at any weld dial setting.
- Two 120V GFCI (Ground Fault Circuit Interrupter) modules are sealed from moisture for more reliable operation.
- All receptacles are circuit breaker protected. Each receptacle has a spring-loaded weather protective cover which keeps each receptacle protected from the environment when not in use.

SIMULTANEOUS WELDING AND AC GENERATOR POWER

Weld Amps		1-Phase Watts	1-Phase Amps		3-Phase Watts	3-Phase Amps		Simultaneous 1- and 3-Phase Watts	Simultaneous 1- and 3-Phase Amps
0		10,000	42		11,000	27		10,000	—
100		8,300	35		8,500	20		8,300	—
200	AND	5,300	22	OR	5,700	14	OR	5,300	—
250		3,500	15		3,500	8		3,500	—
300		400	2		800	2		400	—
400		0	0		0	0		0	—

FEATURES

Single-side engine access with lockable sliding door.

Fuel, oil pressure and engine temperature gauges help you monitor performance.

Output automatically switches to remote mode when remote device is connected. For the CC-stick, downhill pipe and Touch Start TIG modes, the machine output dial becomes a maximum current limit for more fine tuning with the remote control dial or Amptrol™.

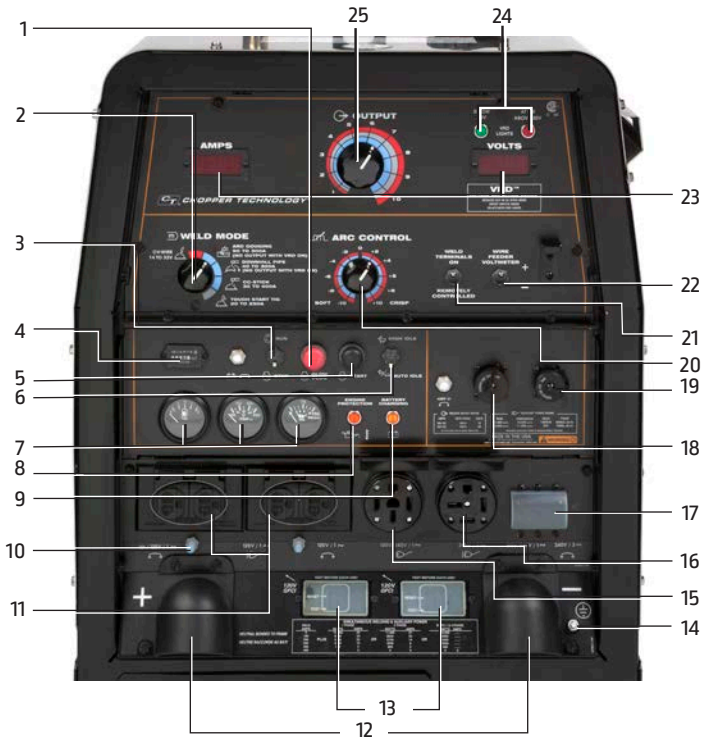
Convenient battery tray below control panel.

Latched and lockable radiator cap cover.

Handy oil drain valve and tube makes oil changes neat.

- Simple Controls – Keeps training time to a minimum. The flip-down control panel door keeps less frequently used dials out of the way. Scratch-resistant Lexan® nameplate.
- Digital meters for amps and volts output make it easy to precisely set your procedures.
- Large 20 gallon (76 liter) fuel tank provides run time for an extended day – over 16 hours of welding at 300A/32V/100% duty cycle output, or 49 hours at high idle.
- The Kubota V1505 engine is a 22 horsepower, water-cooled, 4 cylinder diesel engine with an automatic idler for greater fuel economy and reduced noise.
- Engine hour meter makes it easy to schedule maintenance.
- LN-25 Ironworker™ arcoss-the-arc wire feeder is a recommended option.
- 14-pin connector for Lincoln Electric wire feeders with control cables: LF-72, LF-74, LN-8, Activ8™, LN-25 PRO Dual Power, and LN-742. Also compatible with Magnum® SG spool gun system.
- Two Vantage 322 units can be paralleled in the CC-stick mode to increase output.
- Kilowatts available for Multi-Weld® 350 use: 4.8 KW @ 60V DC, 7.0 KW @ 58V DC.

KEY CONTROLS



1. Glow Plug Button
2. Weld Mode Selector Switch
3. Run/Stop Switch
4. Hour Meter
5. Start Pushbutton
6. Engine Idler Switch
7. Fuel Level, Engine Temperature & Oil Pressure Gauges
8. Engine Protection Light
9. Engine Battery Charging Light
10. 120V AC Circuit Breakers
11. 120V AC Receptacles
12. Covered Weld Output Terminals + and -
13. Sealed GFCI Modules
14. Ground Stud
15. 120/240V AC Full-KVA 1-Phase Receptacle
16. 240V AC Full-KVA 3-Phase Receptacle
17. Full-KVA 1- & 3-Phase Circuit Breaker
18. 14-Pin Wire Feeder Connector
19. 6-Pin Remote Control Connector
20. Arc Force & Inductance/Pinch Control Dial
21. Welding Terminals Control Switch
22. Wire Feeder Voltmeter Polarity Switch
23. Digital Amps and Volts Output Meters
24. VRD™ (Voltage Reduction Device) Indicator Lights
25. Output Control Dial

QUALITY AND RELIABILITY

- Simple wire harnessing keeps connections to a minimum for greater reliability. Lead and harness strain reliefs on all control connections help ensure trouble-free performance.
- Engine protection system includes automatic shutdown for low oil pressure or high engine temperature.
- Indicator light turns on for low oil pressure or high engine temperature. A second indicator light turns on if the engine battery charging system malfunctions.
- Circuit breaker protection on the battery ignition system provides added component protection.
- Environmental friendly engine! The engine has a closed breather system to keep the engine compartment and ground clean. This system eliminates oil mist from collecting inside the engine compartment, especially on surfaces that would lower engine cooling efficiency.
- Self-bleeding engine simplifies startup if your fuel tank runs dry.
- Kubota engine camshaft is gear-driven. No timing belt maintenance.
- Printed circuit boards are environmentally-shielded using Lincoln Electric's engineered potting and protective frame trays.
- Dependability and long life are aided by all-copper windings in rotor and stator with high quality insulation.

- Standard stainless steel roof, side panels and engine-access door deliver added protection, durability and corrosion-resistance. Eliminates the need to paint or replace rusting panels.
- Manufactured under a quality system certified to ISO 9001 requirements and ISO 14001 environmental standards.
- Canadian Standards Association (CSA) certified.
- Three-year Lincoln Electric warranty (engine is warranted separately by the manufacturer - see Engine Specifications, footnote 6).

MACHINE SPECIFICATIONS

Product Name	Ordering Information	Rated Output[1] Current/Voltage/Duty Cycle	Output Range	Open Circuit Voltage	Auxiliary Power[2][3]	H x W x D in. (mm)	Weight lbs.(kg)
Vantage 322 Base Model	K2409-5	IEC Rating: 300A/32V/100% Max Rating: 400A/23V/100%	30-400A CC/CV 40-300A Pipe 20-250A TIG 90-300A Gouge	60V Max OCV @1890 RPM	1-Phase 11.5 kW Peak 10 kW Continuous 120/240V AC, 60Hz 3-Phase 12.5 kW Peak 11 kW Continuous 240V, 60Hz	Machine only 35.9 x 25.3 x 60.0 (913 x 642 x 1524) To top of exhaust tube: 44.3 (1124)	1,035 (469)
Ready-Pak 1	K2409-5 RP1						
Ready-Pak 2	K2409-5 RP2						
Ready-Pak 3	K2409-5 RP3						

(1) High Altitude: For maximum rating, derate the output 2.5% to 3.5% for every 1,000 ft. (300 m). High Temperature: For maximum rating, derate 2 volts for every 18°F (10°C) above 104°F (40°C).
(2) When welding, available AC generator power will be reduced. Output voltage is within +/- 10% at all loads up to rated capacity.
(3) 120V will operate either 60 Hz or 50/60 Hz power tools, lights, etc.

ENGINE SPECIFICATIONS

Engine Model	Description	Horsepower & Displacement	Capacities U.S. gal. (L)	Operating Speeds	Fuel Consumption gal/hr (L/hr)
Kubota V1505[1] EPA Tier 4	4 Cylinder, 22 HP Naturally Aspirated Water-Cooled Diesel Engine	22 HP @ 1800 RPM 91 cu in. (1.5 L)	FUEL: 20 (75.7) OIL: 6.4 qts. (6.0) RADIATOR COOLANT: 7.2 qts. (6.8)	300A Load 1800 RPM	1.17 (4.4)
				High Idle 1890 RPM	0.40 (1.5)
				Low Idle 1350 RPM	0.29 (1.1)

(1) Kubota warranty is 2 years/2,000 hours for machines shipped within the U.S., Canada, Pacific Ocean region and Western Europe. Warranty is 1 year/1,000 hours for Central and South America, Asia, Africa and Middle East.

SYSTEM SELECTION

VANTAGE 322 PACKAGES	Product Number	Ready-Pak 1 (K2409-5-RP1)	Ready-Pak 2 (K2409-5-RP2)	Ready-Pak 3 (K2409-5-RP3)
Vantage 322	K2409-5	●	●	●
Medium Welder Trailer	K2636-1	●	●	●
Duo Hitch: 2 in. (51 mm) Ball/Lunette Eye Hitch (included)	—	●	●	●
Fender and Light Kit	K2639-1	●		●
Cable Rack	K2640-1	●		●
Cable Connectors (qty. 2)	K2487-1	●		
Electrode Cable 2/0, 50 ft. (15.3 m) (qty. 2)	K2485-2	●		
Electrode Cable 2/0, 10 ft. (3 m)	K2483-2	●		
Work Cable 2/0, 50 ft. (15.3 m)	K2484-2	●		
300A Electrode Holder	K909-7	●		
300A Work Clamp	K910-1	●		

● Included

RECOMMENDED ACCESSORIES

GENERAL OPTIONS

Power Plug Kit (20A)
Provides four 120V plugs rated at 20 amps each, and one dual voltage, full KVA (1-Phase) plug rated at 120/240V, 50 amps. 120V plug may not be compatible with common household receptacles.
Order K802N

Full-KVA Power Plug (1-Phase)
One dual voltage plug rated at 120/240V, 50 amps. NEMA 14-50P.
Order T12153-9

Full-KVA Power Plug (3-Phase)
One plug rated at 240V, 50 amps. NEMA 15-50P.
Order T12153-10

Full - KVA Adapter Kit (1-Phase)
Provides convenient connection of Lincoln Electric equipment having a 240V AC 1-phase plug (NEMA 6-50P) to the full-KVA receptacle on Lincoln engine-driven welders.
Order K1816-1

Shown with optional K2639-1 Fender & Light Kit

Medium Welder Trailer
For heavy-duty road, off-road, plant and yard use. Includes pivoting jack stand, safety chains, and 13 in. (330 mm) wheels. Stiff .120 in. (3.0 mm) welded rectangular steel tube frame construction is phosphate etched and powder coat painted for superior rust and corrosion resistance. Low sway suspension gives outstanding stability with manageable tongue weight. Wheel bearings are packed with high viscosity, high pressure, low washout Lubriplate™ grease. Includes a Duo-Hitch™ – a 2 in. (51 mm) Ball/Lunette Eye combination hitch. Overall width 60 in. (1524 mm). Overall length 124 in. (3150 mm).
Order:
K2636-1 Trailer
K2639-1 Fender & Light Kit
K2640-1 Cable Rack

Four-Wheeled Steerable Yard Trailer
For off-road, plant and yard use. Includes an automatically engaging drawbar lock when the drawbar is raised to the verticle position. 13 in. (330 mm) wheels. Wheel bearings are packed with high viscosity, high pressure, low washout Lubriplate grease. Stiff 3/16 in. (4.8 mm) welded rectangular steel frame construction is phosphate etched and powder-coat painted for superior rust and corrosion resistance. Also includes a Duo-Hitch – a 2 in. (51 mm) Ball/Lunette Eye combination hitch. Overall width 55 in. (1397 mm). Overall length 124 in. (3150 mm).
Order K2641-2

Spark Arrestor Kit
Mounts to muffler exhaust to significantly reduce spark emissions.
Order K1898-1

Polarity/Multi-Process Switch
For easy polarity switching. Example: DC-stick root pass on pipe & DC+ stick for hot, fill and cap passes. Also for an easy process change. Example: DC+ stick root pass on pipe and DC- Innershield® self-shielded flux-cored wire for hot, fill and cap passes. 6 & 14-pin remote connections can be made to this unit. For all Lincoln Electric Chopper Technology engine-driven welders. Mounts on roof with K2663-1 Docking Kit.
Order K2642-1

Docking Kit
Secures the K2642-1 Polarity/ Multi-Process Switch to the engine-driven welder roof. Release latch permits removal of K2642-1 Polarity/Multi-Process Switch. Made from stainless steel for rust-free operation. For all Lincoln Electric Chopper Technology® engine-driven welders.
Order K2663-1

STICK OPTIONS

Accessory Kit
Includes 35 ft. (10.7 m) 2/0 electroc cable with lug, 30 ft. (9.1 m) 2/0 work cable with lugs, headshield, filter plate, cover plate, work clan and electrode holder. 400 amp capacity.
Order K704

Remote Output Control
Consists of a control box with choice of two cable lengths. Permits remote adjustment of output.
Order :
K857 for 25 ft. (7.6 m)
K857-1 for 100 ft. (30.5 m)

Remote Output Control with 120V AC Receptacles
Remote weld output control box with two 120V AC receptacles having GFCI (Ground Fault Circuit Interrupter) protection. One cord for both remote and power. 100 ft. (30.5 m) length. Permits remote adjustment of weld output and power for tools (such as a grinder) at the work. 20 amp capacity.
Order K2627-2

TIG OPTIONS

Pro-Torch™ PTA-26V TIG Torch
Air-cooled 200 amp torch (2 piece) equipped with valve for gas flow control. 25 ft. (7.6 m) length.
Order K1783-9

Magnum Parts Kit for PTA-26V TIG Torch
Magnum Parts Kit provides all the torch accessories you need to start welding. 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 KP509

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

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)

Square Wave® TIG 200
This 46 lb (21 kg) TIG and stick welder includes adjustable AC Frequency Control and AC Balance for great results on aluminum, pulse mode and 120V or 230V input power capability.
Order K5126-1

WIRE FEEDER OPTIONS

LN-25 Ironworker® Wire Feeder
Portable CV unit for flux-cored and MIG welding with MAXTRAC® wire drive system. Includes digital meters for wire feed speed/ amperage and voltage, gas solenoid, internal contactor and 5/64 in. (2.0 mm) drive roll kit for cored wire. Has 83% reduced wire feed speed capability for 6 o'clock pipe welding with Innershield wire.
Order K2614-9

K126 PRO Innershield Gun
For self-shielded wire with 15 ft. (4.5 m) cable. For .062-5/64 in. (1.6-2.0 mm) wire. Includes K466-10 Connector Kit.
Order K126-12

Drive Roll and Guide Tube Kit
For .068-.072 in. (1.7-1.8 mm) cored or solid steel wire.
Order KP1697-068

RECOMMENDED ACCESSORIES

Magnum PRO 350 Ready-Pak® 15 ft., .035-5/64 in.
Magnum PRO MIG/flux-cored welding guns are rated 100% duty cycle. The guns are designed for high amperage, high duty cycle applications in extreme environments where heat-resistance and fast serviceability are key.
Order K2652-2-10-45

Drive Roll and Guide Tube Kit
For .035 in. and .045 in. (0.9-1.1 mm) solid steel wire.
Order KP1696-1

Magnum SG Spool Gun
Hand held semiautomatic wire feeder. Requires SG Control Module and Input Cable.
Order K487-25

SG Control Module
The interface between the power source and the spool gun. Provides control of the wire speed and gas flow. For use with a spool gun.
Order K488

Input Cable
(For SG Control Module) For Lincoln Electric engine power sources with 14-pin MS-type connection, separate 115V NEMA receptacles and output stud connections.
Order K691-10

PLASMA CUTTING

Tomahawk® 1000
Cuts metal using the AC generator power from the engine-driven welder. Requires the T12153-9 Full-KVA Power Plug (1-Phase).
Order K2808-1

PRODUCT SPECIFICATIONS

Product Name	Product Number	Rated Output @ 104°F (40°C): Current/Voltage/ Duty Cycle	Output Range	Engine	No. of Cylinders	HP & Speed (rpm)	H x W x D in. (mm)	Net Wt. lb. (kg)
Vantage® 322 Base Model	K2409-5	IEC Rating: 300A/32V/100% Max Rating: 400A/23V/100%	30-400A CC/CV 40-300A Pipe 20-250A DC TIG 90-300A Gouge 3-Phase AC Power: 12.5 kW peak 11.0 kW continuous 1-Phase AC Power: 11.5 kW peak 10.0 kW continuous	Kubota® V1505 Diesel EPA Tier 4 Final Compliant	4	22 @ 1800	35.9 x 25.3 x 60.0 (913 x 642 x 1524) To top of exhaust tube: 44.3 (1124)	1,035 (469)
Ready-Pak® Pkg. 1	K2409-5-RP1							—
Ready-Pak® Pkg. 2	K2409-5-RP2							
Ready-Pak® Pkg. 2	K2409-5-RP3							

For best welding results with Lincoln Electric equipment, always use Lincoln Electric consumables. Visit www.lincolnelectric.com for more details.

Manufactured at a facility with certified ISO Quality and Environmental Management Systems.

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CUSTOMER ASSISTANCE POLICY

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