



VANTAGE 520 SD
ENGINE-DRIVEN WELDERS/GENERATORS

LINCOLN
ELECTRIC



K4107-1 Air Vantage 520 SD
Deutz T4F shown

Utility Machine for the Outdoors

When the job calls for structural steel welding and other rugged outdoor work, you need an engine-driven welder that covers all your process needs – stick, MIG, TIG, flux-cored and gouging – and also meets the latest diesel fuel emissions standards. Upgraded for Tier 4 Final (T4F) compliance, the Vantage® series has been re-engineered to deliver smoother arc characteristics and improved pipe welding capabilities.

Select the 520 SD for 400A/36VDC 100% duty cycle welding performance and gouging with up to 5/16 inch (8 mm) carbons.



A Superior Arc with a Superior Engine

Optimal arc performance

Take control of the arc and maximize the quality of your welds. These Vantage models deliver the best arc in the industry with minimal spatter for stick or pipe welding. Expand your welding capabilities with customized modes for stainless, aluminum, steel and pulse welding. Pulsing enables better arc control in out-of-position work and can lower heat input for critical welds. Enhanced gouging performance prevents the engine from stalling, resulting in smooth material removal.

Cleaner, more reliable engine

Equipped with a Tier 4 Final Deutz engine, these Vantage 520 models deliver a 90% reduction in particulate and nitrous oxide emissions, making them the cleanest diesel power available. Along with lower emissions, these models also provide exceptional fuel efficiency by burning every last drop of fuel out of the engine instead of sending it out as particulate matter. The Vantage 520 series is also built for more reliable cold-weather starts.

Low maintenance, reliable operations

The Vantage SD engine-driven welders contain less wiring and fewer connections than previous designs. The printed circuit boards are environmentally shielded using Lincoln Electric's engineered encapsulation and protective frame trays. Standard stainless steel roof, side panels and engine-access door deliver bulletproof protection, durability and corrosion resistance from the elements.

Processes »

Stick, TIG, MIG, Flux-Cored, Gouging

Applications »

Mining, Construction, Maintenance and Repair

Output »



Input »

Diesel

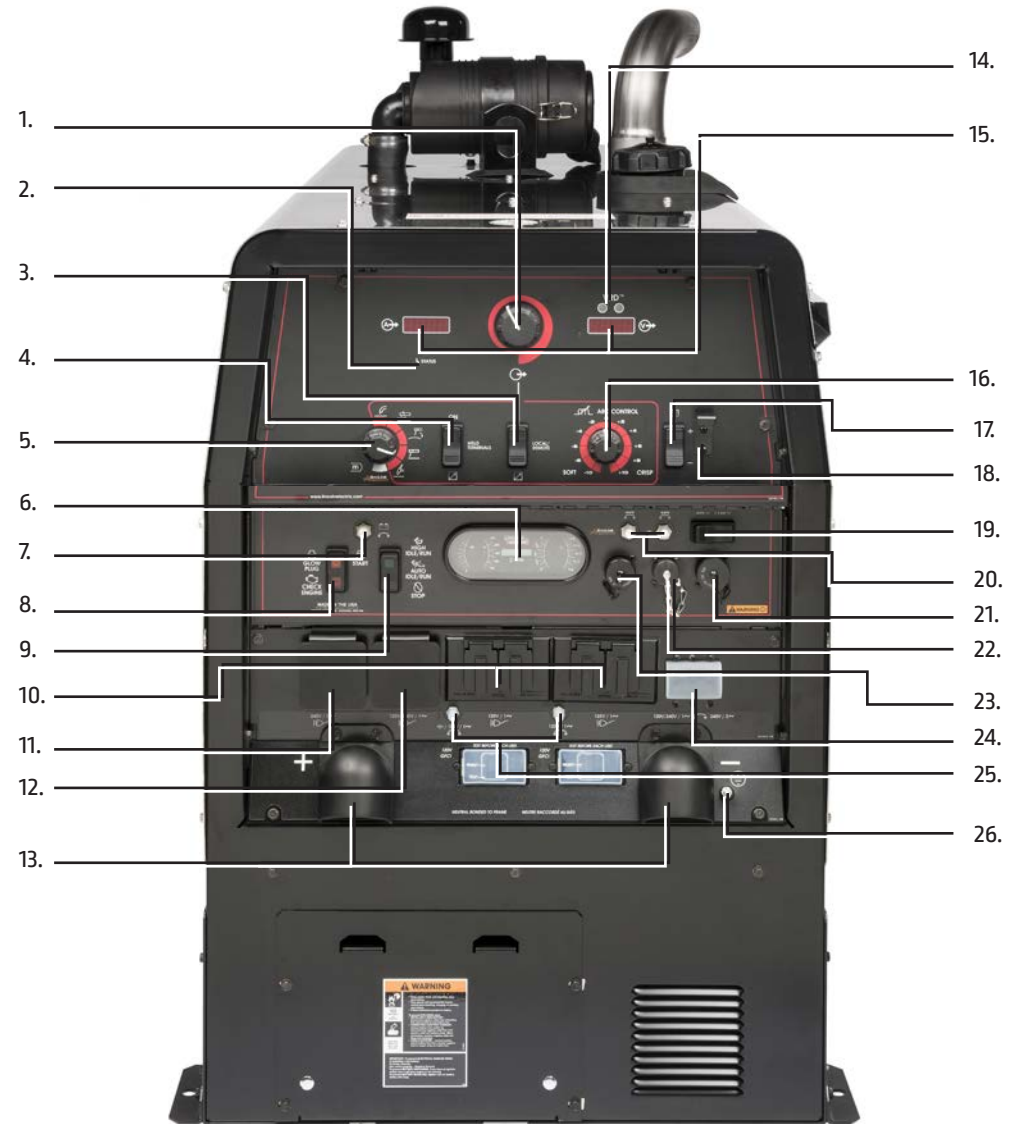
Product Number »

Vantage 520:

- K4107-1 Base Model
- K4173-1 One-Pak®
- K4138-1 Ready-Pak®

Vantage 520 SD Controls »

1. OUTPUT CONTROL
2. STATUS LED
3. POLARITY SWITCH
4. WELD TERMINALS ON SWITCH
5. WELD MODE SELECTOR SWITCH
6. DASH BOARD GAUGE
7. 20A 120V AUXILIARY BREAKERS
8. START SWITCH
9. STOP SWITCH
10. 120 V SINGLE PHASE RECEPTACLES
11. 240VAC THREE PHASE RECEPTACLE
12. 120/240 VAC SINGLE PHASE RECEPTACLE
13. WELD OUTPUT TERMINALS
14. VRD (VOLTAGE REDUCTION DEVICE) INDICATOR LIGHTS
15. DIGITAL OUTPUT METERS
16. ARC CONTROL
17. LOCAL/REMOTE SWITCH
18. DOOR LATCH
19. 42V / 115V WIRE FEEDER VOLTAGE SWITCH
20. BATTERY 20A BREAKER
21. 14-PIN CONNECTOR
22. 12-PIN CONNECTOR
23. 5-PIN CONNECTOR
24. 50A 240V 3 PHASE BREAKER
25. 10A 42V/40V ARCLINK BREAKERS
26. GROUND STUD



VANTAGE 520 SD PACKAGES	Product Number	One-Pak (Unassembled) (K4173-1)	Ready-Pak 1 (shipped fully assembled) (K4138-1)	Ready-Pak 3 (shipped fully assembled) (K4138-12)	Ready-Pak 6 (shipped fully assembled) (K4138-129)
Medium Welder Trailer	K2636-1	•	•	•	•
Fender and Light Kit	K2639-1	•	•	•	•
Cable Rack	K2640-1	•	•	•	•
Electrode Cable 3/0, two 50 ft. (15.3 m) lengths	K2485-3 (QTY 2)	•	•		
Electrode Cable 3/0, 10 ft. (3 m)	K2483-3	•	•		
Work Cable 3/0, 50 ft. (15.3 m)	K2484-3	•	•		
Cable Connectors - two	K2487-1 (QTY 2)	•	•		
400A Electrode Holder	K909-8	•	•		
500A Work Clamp	K910-2	•	•		
LoJack® Device LO/JACK	K3006-1				•

• Included



MACHINE SPECIFICATIONS

Product Name	Product Number	Rated Output @ 104°F(40°C) Current/Voltage/Duty Cycle	Output @ 104°F(40°C) - Welder and Generator			H x W x D in (mm)	Net Weight lbs (kg)
			Output Range	Open Circuit Voltage	Auxiliary Power ⁽¹⁾		
Vantage™ 520 SD Deutz® T4F	K4107-1	IEC Rating: 400A/36V/100% Max Rating: 520A/30V/60%	30 - 520 Amp CC/CV 20 - 250 Amps TIG	60 Max OCV @ 1800 RPM	120/240 VAC ⁽²⁾ Single Phase: 11,000 WATTS, 60Hz. Three Phase: 17,000 WATTS, 60 Hz.	Machine only 39.1 x 28.4 x 65.1 (994 x 721 x 1654)	1382 (626)

ENGINE SPECIFICATIONS

Product Name	Make/Model	Description	Speed (RPM)	HP @ Speed (RPM)	Displacement	Starting System	Capacities
Vantage™ 520 SD Deutz® T4F	Deutz ⁽³⁾ D2.9L4 Naturally Aspirated Diesel Engine EPA TIER 4 Final Compliant	4 Cylinder 34.8HP (25.9 kw) Naturally Aspirated Water Cooled Diesel Engine	High Idle 1800 Low Idle 1500	34.8 @ 1800	177 cu. in (2.9 L) Bore x Stroke 3.6 in x 4.3 in (92 mm x 110 mm)	12VDC battery and Starter with Automatic Glow Plugs	Fuel: 20 US gal (94.6 L) Oil: 2.35 US gal (8.5 L)

⁽¹⁾ When welding, available auxiliary power will be reduced. Output voltage is within +/- 10% at all loads up to rated capacity.

⁽²⁾ Circuits cannot be wired in parallel to operate the same device.

⁽³⁾ Deutz® engine warranty is 3 years.

⁽⁴⁾ Warranty is 3 years/3000 hours whichever comes first for the compressor and 1 year/1,000 hours whichever comes first for the clutch, idler roll and automatic belt tensioner.

ADDITIONAL ACCESSORIES	Product Number	Vantage 520 SD Base Unit (K4107-1)
GENERAL		
<p>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).</p>	K2636-1	•
<p>Power Plug Kit - 20 amp 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.</p>	K802N	•
<p>Full-KVA Power Plug (1-phase) One dual voltage plug rated at 120/240V, 50 amps. NEMA 14-50P.</p>	T12153-9	•
<p>Full-KVA Power Plug (3-phase) One plug rated at 240V, 50 amps. NEMA 15-50P.</p>	T12153-10	•
<p>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.</p>	K1816-1	•
<p>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).</p>	K2641-2	•
<p>Spark Arrestor Kit Mounts to muffler exhaust tube. Virtually eliminates spark emissions.</p>	K3985-1	•
<p>Air Filter Kit Reduces water, oil aerosols, oil vapor and particulates from compressed air. Also reduces the risk of rust in tools, tip wear in plasma cutters and frequency of tip changes. Mounting bracket included.</p>	K3088-1	
STICK		
<p>Remote Output Control - 25 ft (6 pin connector) Consists of a control box with choice of two cable lengths. Permits remote adjustment of output.</p>	K857	•
<p>Remote Output Control - 100 ft (6 pin connector) Consists of a control box with choice of two cable lengths. Permits remote adjustment of output.</p>	K857-1	•
<p>Remote Output Control - 25 ft (12 pin connector) Permits remote adjustment of output. 25 ft. (7.6 m) cable.</p>	K857-2	•
<p>Remote Control Output - 125 ft Consists of a control box with one 125 ft cable. Permits remote adjustment of output.</p>	K4330-1	•

• Optional

ADDITIONAL ACCESSORIES	Product Number	Vantage 520 SD Base Unit (K4107-1)
Remote Output Control With 120V AC Receptacles - 125 ft Consists of a control box with a 125 ft cable. Permits remote adjustment of output. Includes a 115V duplex receptacle that can be used to power lights, grinders and other tools right where welding occurs.	K4268-1	●
TIG		
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.	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 case.	KP509	●
Foot Amptrol™ Provides 25 ft. (7.6 m) of remote output control for TIG welding. (6-pin plug connection).	K870	●
Hand Amptrol™ Provides 25 ft. (7.6 m) of remote current control for TIG welding. (6-pin plug connection). Velcro straps secure torch. (One size fits all Pro-Torch™ TIG Torches)	K963-3	●
MULTI-PROCESS		
Invertec® V350 PRO Multi-Process Welder (Construction Model)	K1728-5	●
WIRE FEEDER		
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.	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.	K126-12	●
Magnum® SG Spool Gun Hand held semiautomatic wire feeder. Requires SG Control Module and Input Cable.	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.	K488	●
Input Cable (For SG Control Module) For Lincoln engine power sources with 14-pin MS-type connection, separate 115V NEMA receptacles and output stud connections.	K691-10	●
Drive Roll and Guide Tube Kit For .068-.072 in. (1.7-1.8 mm) cored or solid steel wire.	KP1697-068	●
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.	K2652-2-10-45	●

● Optional

ADVANCED PROCESS WIRE FEEDERS	Product Number	Vantage 520 SD Base Unit (K4107-1)
Power Feed® 25M Plastic Case Wire Feeder	K2536-5	•
Power Feed® 25M Aluminum Case Wire Feeder	K2536-4	•
Deluxe Adjustable Gas Regulator & Hose Kit Accommodates CO2, argon, or argon-blend gas cylinders. Includes a cylinder pressure gauges, dual scale flow gauge and 4.3 ft. (1.3 m) gas hose.	K586-1	•
Micro Wire Straightener Straightens .035-1/16 inch (0.9-1.6 mm) wire for use with portable feeders.	K1733-4	•
ArLink® "T" Connector Kit For connecting multiple feeders to a single power source.	K2429-1	•
Heavy Duty ArLink® Control Cable - 25 ft.	K2683-25	•
Heavy Duty ArLink® Control Cable - 50 ft.	K2683-50	•
Heavy Duty ArLink® Control Cable - 100 ft.	K2683-100	•



• Optional



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.