



VANTAGE 600 SD
AIR VANTAGE 600 SD
AIR VANTAGE 600 SD HYDRAULIC
ENGINE-DRIVEN WELDERS/GENERATORS





K4343-1
Air Vantage 600 SD Hydraulic
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.

Choose the Vantage 600 engine driven welder SD for 575A/43VDC 100% duty cycle welding and gouging with up to 3/8 inch (9.5 mm) carbons. The Air Vantage® 600 SD welder includes a belt-driven compressor with separate gauges to monitor compressor hours and pressure.

The Air Vantage 600 SD Hydraulic welder packs all the aforementioned capabilities plus the power and technology you need for any hydraulic application, providing a truly epic all-in-one machine.



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 optimal arc quality 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 600 SD 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 600 SD 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. Its standard stainless steel roof and engine-access door deliver bulletproof protection, durability and corrosion resistance from the elements.

Processes »

Stick, TIG, MIG, Flux-Cored, Gouging

Applications »

Railroad, Mining, Heavy Duty
Construction, Maintenance
and Repair

Output »



Input »

Diesel

Product Number »

Vantage 600 SD:

- K3239-1 Base Model
- K4136-1 Ready-Pak®
- K3245-5 One-Pak®

Air Vantage 600 SD:

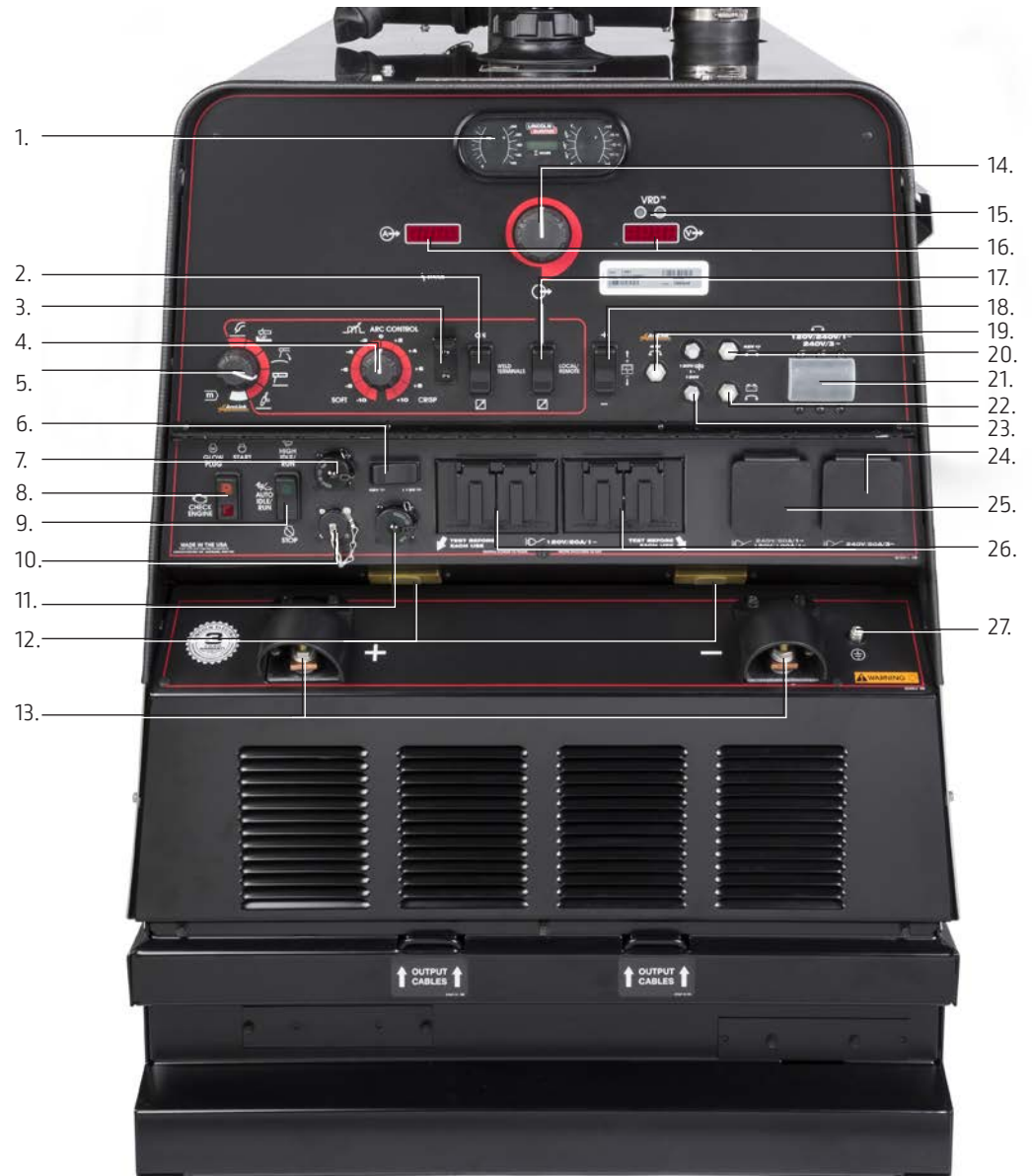
- K3242-1 Base Model
- K4137-1 Ready-Pak®
- K3958-5 One-Pak®

Air Vantage 600 SD Hydraulic

- K4343-1 Base Model

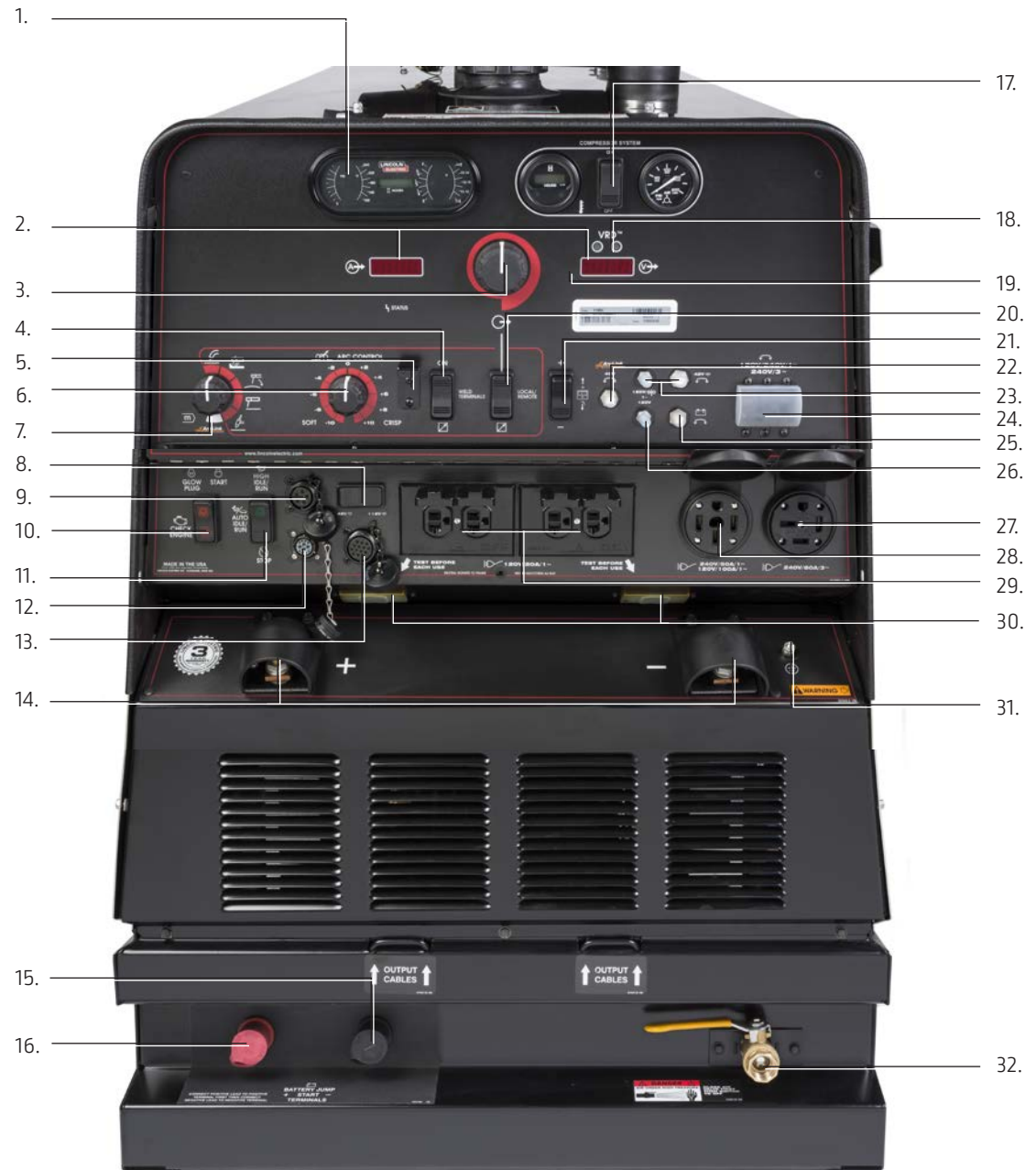
Vantage 600 SD Controls »

1. DASHBOARD GAUGE
2. WELD TERMINALS ON SWITCH
3. DOOR LATCH
4. ARC CONTROL
5. WELD MODE SELECTOR SWITCH
6. 42V / 115V WIRE FEEDER VOLTAGE SWITCH
7. 5-PIN CONNECTOR
8. START/GLOW PLUG
9. RUN/STOP/IDLE
10. 12-PIN CONNECTOR
11. 14-PIN CONNECTOR
12. GFCI MODULES
13. WELD OUTPUT TERMINALS
14. OUTPUT CONTROL
15. VRD (Voltage Reduction Device) INDICATOR LIGHTS
16. DIGITAL OUTPUT METERS
17. LOCAL/REMOTE SWITCH
18. WIREFEEDER VOLTMETER POLARITY SWITCH
19. 10A ARCLINK CIRCUIT BREAKER
20. 42VAC CIRCUIT BREAKER
21. 50A 240V 3 PHASE BREAKER
22. BATTERY 20A BREAKER
23. 20A 120V AUXILIARY BREAKERS
24. 240VAC THREE PHASE RECEPTACLE
25. 120/240 VAC SINGLE PHASE RECEPTACLE
26. 120 VAC SINGLE PHASE RECEPTACLES
27. GROUND STUD



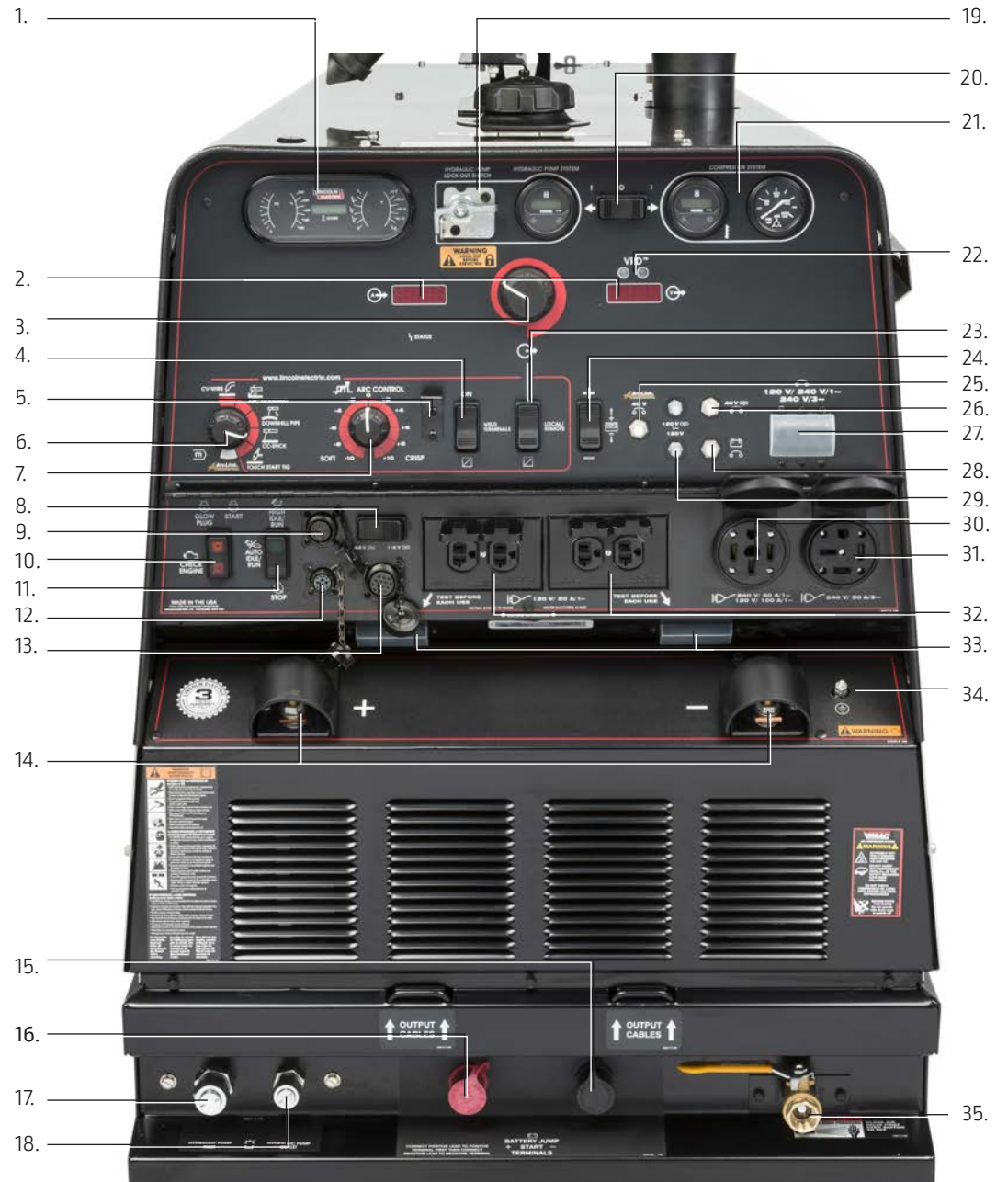
Air Vantage 600 SD Controls »

1. DASH BOARD GAUGE
2. DIGITAL OUTPUT METERS
3. OUTPUT CONTROL
4. WELD TERMINALS ON SWITCH
5. DOOR LATCH
6. ARC CONTROL
7. WELD MODE SELECTOR SWITCH
8. 42V / 115V WIRE FEEDER VOLTAGE SWITCH
9. 5-PIN CONNECTOR
10. START/GLOW PLUG
11. RUN/STOP/IDLE
12. 12-PIN CONNECTOR
13. 14-PIN CONNECTOR
14. WELD OUTPUT TERMINALS
15. NEGATIVE BATTERY JUMP START TERMINAL
16. POSITIVE BATTERY JUMP START TERMINAL
17. COMPRESSOR SYSTEMS
18. VRD (VOLTAGE REDUCTION DEVICE) INDICATOR LIGHTS
19. HIDDEN MENU BUTTON
20. LOCAL/REMOTE SWITCH
21. WIREFEEDER VOLTMETER POLARITY SWITCH
22. 10A ARCLINK CIRCUIT BREAKER
23. 42VAC CIRCUIT BREAKER
24. 50A 240V 3 PHASE BREAKER
25. BATTERY 20A BREAKER
26. 20A 120V AUXILIARY BREAKERS
27. 240VAC THREE PHASE RECEPTACLE
28. 120/240 VAC SINGLE PHASE RECEPTACLE
29. 120 VAC SINGLE PHASE RECPTACLES
30. GFCI MODULES
31. GROUND STUD
32. ARC COMPRESSOR OUTLET



Air Vantage 600 SD Hydraulic Controls »

1. DASH BOARD GAUGE
2. DIGITAL OUTPUT METERS
3. OUTPUT CONTROL
4. WELD TERMINALS ON SWITCH
5. DOOR LATCH
6. WELD MODE SELECTOR SWITCH
7. ARC CONTROL
8. 42V / 115V WIRE FEEDER VOLTAGE SWITCH
9. 5-PIN CONNECTOR
10. START/GLOW PLUG
11. RUN/STOP/IDLE
12. 12-PIN CONNECTOR
13. 14-PIN CONNECTOR
14. WELD OUTPUT TERMINALS
15. NEGATIVE BATTERY JUMP START TERMINAL
16. POSITIVE BATTERY JUMP START TERMINAL
17. HYDRAULIC SYSTEM INLET
18. HRDRAULIC SYSTEM OUTLET
19. HRDRAULIC PUMP LOCKOUT
20. HYDRAULIC PUMP/AIR COMPRESSOR
21. AIR COMPRESSOR SYSTEMS
22. VRD [Voltage Reduction Device] INDICATOR LIGHTS
23. LOCAL/REMOTE SWITCH
24. WIREFEEDER VOLTMETER POLARITY SWITCH
25. 10A ARCLINK CIRCUIT BREAKER
26. 42VAC CIRCUIT BREAKER
27. 50A 240V 3 PHASE BREAKER
28. BATTERY 20A BREAKER
29. 20A 120V AUXILIARY BREAKERS
30. 120/240VAC SINGLE PHASE RECEPTACLE
31. 240VAC THREE PHASE RECEPTACLE
32. 120VAC SINGLE PHASE RECEPTACLES
33. GFCI MODULES
34. GROUND STUD
35. AIR COMPRESSOR OUTLET



The Welding Industry's First 4-in-1 Heavy Duty Machine – Air Vantage 600 SD Hydraulic



Welding

600A DC/40V/60%
575 A DC/43V/100%



AC Generator

Single Phase: 12,000 watts 60Hz
Three Phase: 20,000 watts 60 Hz



Air Compressor

60 scfm @ 100 psi
{28.3 ltr/sec @ 7.0 Kg/cm}



Hydraulic Pump

10 gal/min @ 3000 psi

Machine Packages

VANTAGE 600 SD PACKAGES	Product Number	One-Pak (Unassembled) (K3245-5)	Ready-Pak 1 (shipped fully assembled) (K4136-1)	Ready-Pak 3 (shipped fully assembled) (K4136-12)	Ready-Pak 6 (shipped fully assembled) (K4136-129)
Large Welder Trailer	K2637-2	•	•	•	•
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				•



AIR VANTAGE 600 SD PACKAGES	Product Number	One-Pak (Unassembled) (K3958-5)	Ready-Pak 1 (shipped fully assembled) (K4137-1)	Ready-Pak 3 (shipped fully assembled) (K4137-12)	Ready-Pak 6 (shipped fully assembled) (K4137-129)
Large Welder Trailer	K2637-2	•	•	•	•
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

AIR VANTAGE 600 SD HYDRAULIC NO PACKAGES CURRENTLY AVAILABLE



Machine Specifications

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 600 SD Deutz T4F	K3239-1	575A/43V/100% 600A/40V/60%	30 - 600 Amps CC/CV 20 - 350 Amps TIG	60 Max OCV @ 1800 RPM	120/240 VAC ⁽²⁾ Continuous Single Phase: 12,000 WATTS, 60Hz. Continuous Three Phase: 20,000 WATTS, 60 Hz.	Machine only 42.0 x 31.5 x 63.1 (1067 x 800 x 1603) To top of exhaust tube: 50.8 (1290)	1662 (754)
Air Vantage 600 SD Deutz T4F	K3242-1						1737 (788)
Air Vantage 600 SD Hydraulic	K4343-1					42 x 32.9 x 69 (1067 x 836 x 1753)	1800 (816)

ENGINE SPECIFICATIONS

Product Name	Make/Model	Description	Speed (RPM)	HP @ Speed (RPM)	Displacement	Starting System	Capacities
Vantage 600 SD Deutz T4F	Deutz Turbo Charged ⁽³⁾ TD2.9L4 Diesel Engine EPA TIER 4 Final Compliant	4 Cylinder 65.7HP (49 kw) Turbo Charged Water Cooled Diesel Engine	High Idle 1800 Low Idle 1500	65.7 @ 1800	178 cu. in (2.9 L) Bore x Stroke 3.62 in x 4.33 in (92 mm x 110 mm)	12VDC battery and Starter with Automatic Glow Plugs	Fuel: 25 US gal (94.6 L) Oil: 2.25 US gal (8.5 L)
Air Vantage 600 SD Deutz T4F							
Air Vantage 600 SD Hydraulic Deutz T4F							

AIR COMPRESSOR SPECIFICATIONS

Product Name	Compressor Model	Description	Delivery	Maximum System Pressure	Compressor Protection	Capacities
Air Vantage 600 SD Deutz T4F	VMAC ⁽⁴⁾ (S700162)	Belt-Drive Rotary Screw S700162	High Idle 60 CFM @ 100PSI (28.3 LTR/SEC. @ 7.0 KG/CM)	150 PSI (10.5 kg/cm ²)	Safety Relief Valve 200 PSI (14.1 kg/cm ²) High Temperature Automatic Shutdown 290 °F (143 °C)	Compressor Oil: 1.1 gal (4.0 L) ⁽⁵⁾
Air Vantage 600 SD Hydraulic Deutz T4F						

AIR VANTAGE 600 SD - HYDRAULIC PUMP

	Model	Description	Output @ High Idle	Inlet Fitting	Outlet Fitting
Air Vantage 600 SD Hydraulic Deutz T4F	Cassappa® PHP20	Belt-driven Cast Iron Gear Pump 12V Electro-clutch	10 gal/min @ 3000 psi	SAE12, 37 degrees JIC male flare	SAE10, 37 degrees JIC male flare

⁽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.

⁽⁵⁾ VMAC® synthetic compressor oil recommended for best operation results, or oil approved by VMAC®.

ADDITIONAL ACCESSORIES	Product Number	Vantage 600 SD Base Unit [K3239-1]	Air Vantage 600 SD Base Unit [K3242-1]	Air Vantage 600 SD Hydraulic Base Unit [K4343-1]
GENERAL				
Large Welder Trailer For heavy-duty road, off-road, plant and yard use. Includes pivoting jack stand, safety chains, and 14 in. (356 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).	K2637-2	•	•	•
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.	K802N	•	•	•
Full-KVA Power Plug (1-phase) One dual voltage plug rated at 120/240V, 50 amps. NEMA 14-50P.	T12153-9	•	•	•
Full-KVA Power Plug (3-phase) One plug rated at 240V, 50 amps. NEMA 15-50P.	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.	K1816-1	•	•	•
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).	K2641-2	•	•	•
Spark Arrestor Kit Mounts to muffler exhaust tube. Dramatically reduces spark emissions.	K3985-1	•	•	•
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.	K3088-1		•	•
STICK				
Remote Output Control - 25 ft (6 pin connector) Consists of a control box with one 25 ft cable. Permits remote adjustment of output.	K857	•	•	•
Remote Output Control - 100 ft (6 pin connector) Consists of a control box with one 100 ft cable. Permits remote adjustment of output.	K857-1	•	•	•
Remote Output Control - 25 ft (12 pin connector) Permits remote adjustment of output. 25 ft. (7.6 m) cable.	K857-2	•	•	•
Remote Control Output - 125 ft Consists of a control box with one 125 ft cable. Permits remote adjustment of output.	K4330-1	•	•	•
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	•	•	•

• Optional

ADDITIONAL ACCESSORIES	Product Number	Vantage 600 SD Base Unit (K3239-1)	Air Vantage 600 SD Base Unit (K3242-1)	Air Vantage 600 SD Hydraulic Base Unit (K4343-1)
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). Hook and loop 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	•	•	•
ADDITIONAL ACCESSORIES				
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 600 SD Base Unit [K3239-1]	Air Vantage 600 SD Base Unit [K3242-1]	Air Vantage 600 SD Hydraulic Base Unit [K4343-1]
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 CO ₂ , 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



Aluminum
(K2536-4)



Plastic
(K2536-5)

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.

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