



**SAE-300<sup>®</sup> MP**

ENGINE-DRIVEN WELDER / GENERATOR

**LINCOLN<sup>®</sup>**  
**ELECTRIC**

# Quality and Efficiency on the Pipeline

## The SAE<sup>®</sup>-300 MP

When it comes to pipeline construction and maintenance, you deal with more unpredictable variables than you'd care to count. Adverse weather, natural terrain and regulatory requirements are just a few. Given the natural and man-made uncertainties often associated with your business, you need equipment you can count on to maximize quality and efficiency, minimize repair time and control costs.

The SAE-300 MP multi-process engine-driven welder responds to the numerous challenges that are a fact of life in pipe welding operations. For example, the welder features Temperature Stabilization™, enabling you to "set it and forget it" by eliminating any need for adjustments based on ambient conditions or warm-up period.

With a standard built-in CV output contactor, this engine-driven welder eliminates the need for a separate wire feeder module and the downtime associated with installing it. Additionally, the OCV Boost function can be used to aid arc starting and low amperage welding. And, a standard on-board block heater is ready to pre-heat the engine for use in cold environments.

Some variables will always be beyond your control, but quality, efficiency and performance should always be within reach – no matter how long the pipeline or how challenging the job. Eliminate the unpredictable with an engine-driven welder that gives you consistent power and maximum control.



SAE-300 MP Gray Painted Steel  
K4089-1, K4090-1 & K4090-2

SAE-300 MP (Perkins) Stainless  
Case/Wireless Remote  
K4089-2





## STABILITY, CONTROL, ENDURANCE

### DC from the Start

The SAE-300 MP is powered by a hand-built pure DC generator from the only welding manufacturer providing this proven technology to the market. The all-copper windings and flat DC output ensure a smooth, stable arc that enhances arc control, helping operators keep defects to a minimum to avoid cutouts and costly repairs.

### Dual Current Control

No two pipe joints are the same – hi-lo fit-up, out-of-round pipe and gap variations can challenge any bead hand to lay in a defect-free weld subject to 100% x-ray inspection. Getting those results requires tremendous control over the arc. The SAE-300 MP is equipped with dual continuous current control – use the coarse control to set a digging, penetrating arc for root beads or a soft, buttery arc for stacking iron on the fill and cap passes. Then you or your helper, using a remote control, can dial in the fine control to adjust heat input, or arc sensitivity, in response to fit-up and orientation of the weld puddle on the pipe.

### Built for the Long Shift

Pipelines are all about mileage – and in many cases, a lot of it – so you need an engine-driven welder that will go farther without having to stop for refueling. Our 16 gallon (60.6 L) tank is almost 50% larger than the competitor's 11 gallon (41.6 L) counterpart, which translates to longer run times, improved efficiency and greater cost savings. The new heavy-duty stainless steel case and rugged wired or wireless remotes add to the durability and utility of these welders.

Day after day, year after year and decade after decade, pure DC generator machines like the SAE-300 MP have been proven to take the abuse of field welding with the lowest maintenance costs and best resale value among diesel-driven welders.

That's what you call a true workhorse.

#### Processes »

Stick, TIG, MIG, Flux-Cored, Gouging

#### Applications »

Pipeline, Maintenance and Repair, Construction

#### Output Range »

40-350A DC Welding  
(Continuous Control)  
3000 Watts AC Generator

#### Rated Output - Current/Voltage/Duty Cycle »

300A DC/32V/60%  
250A DC/30V/100%

#### Number of Cylinders »

3

#### HP @ Speed (RPM) »

Perkins® 24.7 Hp @ 1800 RPM  
Kubota® 24.7 Hp @ 1800 RPM

#### Product Number »

K4089-1 Perkins® (Base Model)

K4090-1 Kubota® (Base Model)

K4090-2 Kubota Gray Painted Steel Case w/Wireless Remote Control

K4089-2 Perkins Stainless Steel Case w/Wireless Remote Control

#### Output »



#### Input »



## Controls >>

1. COARSE CURRENT CONTROL
2. ENGINE COOLANT TEMPERATURE GAUGE
3. FUEL / HOUR METER GAUGE
4. OIL PRESSURE GAUGE
5. BATTERY CHARGE FAULT LED
6. ENGINE FAULT LED
7. HIGH / AUTO IDLE SWITCH
8. IGNITION RUN/STOP SWITCH
9. START BUTTON
10. GLOW PLUG COLD WEATHER STARTING BUTTON
11. FINE CURRENT CONTROL
12. WIRE [CV] / STICK [CC] MODE SWITCH
13. OCV (OPEN CIRCUIT VOLTAGE) BOOST SWITCH
14. 15 AMP, 240VAC (6-15R) RECEPTACLE 2 POLE, 15 AMP BREAKER
15. 20 AMP, 120VAC (5-20R) DUPLEX RECEPTACLE WITH GFCI PROTECTION
16. CV TERMINAL ON/OFF SWITCH
17. WIRE FEEDER VOLT METER POLARITY SWITCH
18. 6-PIN AMPHENOL® FOR WIRED REMOTE CONTROL CABLE
19. 14-PIN AMPHENOL FOR VOLTAGE AND OUTPUT TERMINAL CONTROL AT WIRE FEEDER (42VAC NOT INCLUDED)
20. WIRELESS REMOTE CONTROL SWITCH (K4089-2 & K4090-2)



Shown: K4089-1 Gray Painted Steel Case (Base Model)

SAE-300 MP READY-PAK PACKAGES	Product Number	SAE-300 MP Ready-Pak 1 [Assembled] [K4089-1-RP1]	SAE-300 MP Ready-Pak 2 [Assembled] [K4089-1-RP2]	SAE-300 MP Ready-Pak 3 [Assembled] [K4089-1-RP3]
SAE-300 MP (Perkins)	K4089-1	•	•	•
SAE-300 MP (Kubota)	K4090-1			
Medium Welder Trailer (Includes Duo-Hitch® – 2 in [51 mm] Ball/Lunette and eye hitch)	K2636-1	•	•	•
Fender and Light Kit	K2639-1	•		•
Cable Rack	K2640-1	•		•
Electrode Cable 2/0, Two 50 ft [15.3 m] Lengths	K2485-3	•		
Electrode Cable 2/0, 10 ft [3 m]	K2483-3	•		
Work Cable 2/0, 50 ft [15.3 m]	K2484-3	•		
300A Electrode Holder	K909-8	•		
300A Work Clamp	K910-2	•		
Cable Connectors - Qty. 2	K2487-1	•		
125 ft [38 m] Wired Remote Control w/115V AC Aux. Power	K4268-1			

**Order Wired Remotes in One-Pak Packages or as Accessories**

- Generous 125 ft. (38.1 m) cable
- Detachable Control Box can be stowed in your truck or job box
- Customizable MIN/MAX Range is easy to set in seconds
- K4268-1 model includes a 115V AC Auxiliary Power duplex receptacle

**Order Wireless Remotes as Factory Installed in specific SAE-300 MP models only [K4089-2 & K4090-2]**

- Small, weather-resistant remote fits right in your hand
- 400 ft. (122 m) range, depending on obstructions
- Activate the glow plug / choke for anywhere from 1-30 seconds
- Start or stop the engine
- Activate high or low idle
- Change the Fine Current Control output for stick welding



## MACHINE SPECIFICATIONS

Product Name	Product Number	Description	Output @ 104°F (40°C) - Welder and Generator			Dimensions H x W x D - in (mm)	Net Weight lb (kg)
			Rated DC Output Current / Voltage/Duty Cycle	DC Current Fine Adjustment Range	Auxiliary Power <sup>(1)</sup>		
SAE-300 MP Perkins Model (Base Model)	K4089-1	300 Amp DC Arc Welder  All Copper Windings  Pure DC Power Generator	NEMA Ratings 300A / 32V / 60% 250A / 30V / 100%  90V DC Max OCV	40-350 Amps	3,000 Watts 60 Hz, AC  20 Amps @ 120V with sealed GFCI Module  13 Amps @ 240V	37.1 x 24.3 x 62.8 (943 x 616 x 1594)	1419 (644)
SAE-300 MP Stainless Steel Case w/ Wireless Remote Control (Perkins)	K4089-2						1419 (644)
SAE-300 MP Kubota Model (Base Model)	K4090-1						1432 (649)
SAE300 MP Gray Painted Steel Case w/Wireless Remote Control (Kubota)	K4090-2						1432 (649)

<sup>(1)</sup> Output rating in watts is equivalent to volt-amperes at unity power factor. Output voltage is within +/- 10% at all loads up to the rated capacity. When welding, the available auxiliary power will be reduced.

## ENGINE SPECIFICATIONS

Product Name	Engine Model	Description	Horsepower & Displacement	Starting System	Dry Capacities	Operating Speeds	Fuel Consumption
SAE-300 MP	Perkins® 403F-15T Diesel <sup>(2)</sup> EPA Tier 4	3 Cylinder 4 Cycle Water-Cooled Turbo-Charged (Perkins® Only) Diesel Engine	24.7 HP @ 1800 RPM	Compression ignited	Fuel: 16 Gals (60.6 Liters) Oil: 6.3 Qts (6.0 Liters) Coolant: 7.8 Qts (7.3 Liters)	Full Load: 300A (1,800 RPM) High Idle: 1,800 RPM Low Idle: 1,440 RPM	Full Load: 0.2 Gals / Hr 0.8 Liters / Hr  High Idle: 0.4 Gals / Hr 1.3 Liters / Hr
	Kubota® D1503 Diesel <sup>(3)</sup> EPA Tier 4	Cast iron cylinders Block/Crank case Electronic Governor	91.5 cu in. (1.5 Liters)		Fuel: 16 Gals (60.6 Liters) Oil: 5.9 Qts (5.6 Liters) Coolant: 7.8 Qts (7.3 Liters)	Full Load: 300A (1,800 RPM) High Idle: 1,800 RPM Low Idle: 1,440 RPM	Low Idle: 1.2 Gals / Hr 4.5 Liters / Hr

<sup>(2)</sup> Perkins® warranty is 2 years/2000 hours, all components, 3 years major components. See warranty for details. <sup>(3)</sup> Kubota® engine warranty for U.S. and Canada is 2 years/2,000 hours, 3 years major components. Some limitations exist for Canada. See warranty statement for details.

## ADDITIONAL ACCESSORIES

Product Number

SAE-300 MP  
Base Unit  
K4089-1 / K4090-1  
K4089-2 / K4090-2

### GENERAL

**Wired Remote Control** – 125 ft (38.1 m). Includes control box, cable and 6-pin MS-Type connector



K4330-1

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**Wired Remote Control** – 125 ft (38.1 m) with 115 volt AC Auxiliary Power. Includes control box, cable and 6-pin MS-Type connector.



K4268-1

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**Power Plug Kit** – Provides two 115V plugs rated at 20 amps each, and two 230V plugs rated at 15 amps each.

K802D

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**Spark Arrestor Kit** – Easily mounts to standard Muffler.

K903-1

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**Medium Welder Trailer** – For heavy-duty road, off-road, plant and yard use. Includes pivoting jack stand, safety chains, and 13 in wheels. Overall width 60 in. Stiff .120 in 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. Wheels bearings are packed with high viscosity, high pressure, low washout Lubriplate® grease. Features a Duo-Hitch+ - a 2 in Ball/Lunette Eye combination hitch.

K2636-1

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**Fender & Light Kit** – Allows use of trailer at night and as required by local regulations. Includes fenders, lights with guards, mounting brackets, wiring and hardware.

K2639-1

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**Cable Rack** – For storage of approximately 100 ft (30.5 m) of 2/0 (70 mm<sup>2</sup>) welding cable per side.

K2640-1

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### STICK

**Accessory Kit** – For stick welding. Includes 35 ft (10.7 m) 2/0 electrode cable with lug, 30 ft (9.1 m) 2/0 work cable with lugs, headshield, filter plate, work clamp and electrode holder.

K704

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### TIG

**Pro-Torch® PTA-26V TIG Torch** – Light and easy to use, these torches give you the power of maximum versatility and maneuverability. A molded, knurled handle gives you a sure grip so you can focus on the weld. "V" model torches provide a convenient gas control valve to turn off and on shielding gas at the torch. Whether you are an occasional TIG welder, fabrication shop or production welder, Pro-Torch TIG torches are right for you.

K1783-9

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**Magnum® Parts Kit for PTA-26V TIG Torch** – Magnum Parts Kits provide all the torch accessories you need to start welding. Parts Kits provide collets, collet bodies, a back cap, alumina nozzles and tungstens in a variety of sizes, all packaged in an easy to carry reclosable box.

KP509

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**TIG Module** – Supplies high frequency for superior starting, contactor control, remote control capability and a gas valve for AC or DC TIG welding (polarity selection dependent on output characteristics of power source). Rated at 300 amps/60% duty cycle. Requires 115V, single phase input power.

K930-2

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**Control Cable** – Control Cable for the TIG Module. Connects 9-pin socket on TIG Module to 115V plug.

K936-4

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**Control Cable Extension** – Allows the TIG Module to be operated at distances up to 200 ft. from the power source.

K937-45

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**Arc Start Switch** – Needed if an Amptrol® is not used when TIG welding. Comes with a 25 ft (7.6m) cable. Attaches to the TIG torch for convenient finger control.

K814

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**Contactor Kit** – Installs in the K930-2 TIG Module for use with welders without a contactor. Makes the TIG torch electrode electrically 'cold' until the Amptrol® is activated.

K938-1

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**Foot Amptrol™** – Depress pedal to increase current. Depressing pedal fully achieves maximum set current. Fully raising the pedal finishes the weld and starts the Afterflow cycle.

K870

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**Hand Amptrol™** – Provides 25 ft. (7.6 m) of remote current control for TIG welding.

K963-3

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## ADDITIONAL ACCESSORIES

### WIRE FEEDER

LN-25 Pipe Wire Feeder



	Product Number	SAE-300 MP Base Unit K4089-1 / K4090-1 K4089-2 / K4090-2
LN-25 Pipe Wire Feeder	K2614-5	•
Drive Roll and Guide Tube Kit – Drive Roll and Guide Tube Kit for feeding .068 in (1.8 mm) cored wire.	KP1697-068	•
Drive Roll and Guide Tube Kit – Drive Roll and Guide Tube Kit for feeding .035 in (0.9 mm) or .045 in (1.1 mm) solid wire.	KP1696-1	•
Magnum <sup>®</sup> PRO 350 Ready-Pak 15 ft, 0.035-5/64 in. – Magnum PRO guns for MIG and flux-cored welding are specifically designed and tested for extreme environment welding applications. These guns are built for high amperage, high duty cycle applications where heat-resistance and fast serviceability are key.	K2652-2-10-45	•
K126 <sup>™</sup> PRO Innershield 350A FCAW-SS Welding Gun 15 ft 1/16-5/64 – New replaceable liner system. Magnum PRO Copper Plus Contact Tips. Replaceable contact tip holder. Interchangeable gun connectors for use on a wide range of feeders. Integrated trigger leads in coaxial cable rather than externally routed.	K126-12	•
Magnum SG Spool Gun – A lightweight, well balanced semiautomatic spool gun designed for easy and reliable aluminum wire feeding with a variety of CV power sources and engine-driven welders. Rated 250 amps @ 60%, the Magnum SG features a generous 25 ft (7.5 m) gun cable and integrated wire feed speed control in the handle to cut your trips back to the power source.	K487-25	•
SG Control Module – Provides control of wire speed and gas flow. For use with CV power sources and CV Engine Drives with output contactor.	K488	•
Input Cable (For SG Control Module) – Required for connection of SG Control Module (K488) to power source. Consists of control and electrode cables and gas line. 10 ft. (3.0m). For Lincoln engine driven power sources with 14-pin MS-type connection, separate 115V NEMA receptacles and lug power connections.	K691-10	•

#### CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company<sup>®</sup> 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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