



# TECHNOPOWER

# TP300

POWERED BY PERKINS  
1706A-E93TAG1



Genset Model	TP300
Engine Model	1706A-E93TAG1
Alternator Model	TAL046F
Controller Model	Deep Sea 4520 MKII

### PRIME RATINGS

These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercial purchased power. There is no limitation to the annual hours of operation and this model can supply 10% Overload power for 1hour in 12 hours operation.







### STANDBY RATINGS

These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings.

OUTPUT RATINGS		50 Hz		60Hz	
		PRIME	STANDBY	PRIME	STANDBY
KVA POWER	KVA	307.0	339.0	357.0	395.0
KW POWER	KW	246.0	271.0	286.0	316.0
RATED SPEED	r.p.m	1500		1800	
VOLTAGE	V	230/400		110/220	
		240/415		220/380	



## ENGINE SPECIFICATIONS

-  **Three Phase**
-  **Diesel**
-  **Water Cooled**
-  **50/60Hz**
-  **45 Amps Battery Charging Alternator**
-  **24V Negative**

Manufacturer	PERKINS
Model	1706A-E93TAG1
Engine Type	4-stroke
Aspiration Type	Turbo Charged after cooled
Bore and Stroke	115 x 149 mm
Cooling System	Liquid
Number of cylinders and arrangement	6/ Vertical in Line
Compression Ratio	16.5 : 1
Circuit Breaker Type	3Pole MCCB
Displacement	9.3 L





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## ALTERNATOR SPECIFICATIONS

Manufacturer	Leroy Somer
Model	TAL046F
No of Bearings	1
Insulation Class	H
Wires	6(12)
Ingress Protection Rating	IP23
Excitation System	SHUNT
AVR Model	R150

Over speed (rpm)	2250
Voltage Regulation(steady state)	+/- 0.5%
Wave from NEMA=TIF	50
Wave From IEC=THF	2.0%
Total Harmonic Content LL/NN	2.5%
Radio Interference	Supression is in line with European Standard EN61000-6
Radiant Heat kW	50Hz 18.4
	60Hz 20.7

■ IP23 Protection

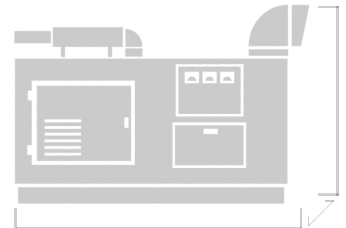
■ H Class Insulation

■ SHUNT Excitation System

## WEIGHT AND DIMENSIONS



		OPEN	CLOSE
LENGTH	mm	3300	3700
WIDTH	mm	1100	1550
HEIGHT	mm	1850	1950
WEIGHT	kg	2755	3400



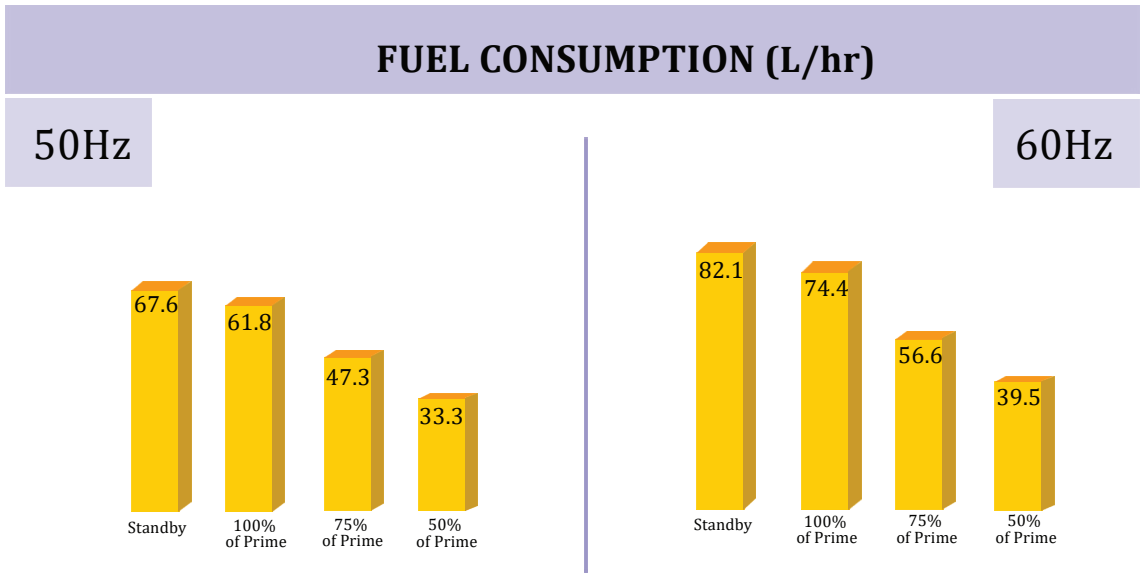


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Fuel Filter Type	Replaceable Element
Recommended Fuel	Class A1/A2 Diesel
Fuel Tank Capacity	390L



FUEL SYSTEM

		50Hz		60Hz			
EXHAUST	SILENCER TYPE	INDUSTRIAL					
	MAX. ALLOWABLE BACK PRESSURE	kPa(in Hg)		10.0(3.0)	10.0(3.0)		
	SILENCER NOISE REDUCTION LEVEL			15.8 dB	15.8 dB		
				PRIME	STANDBY	PRIME	STANDBY
	EXHAUST GAS FLOW	m <sup>3</sup> /min(cfm)		41.74	44.46	52.31	55.49
	EXHAUST GAS TEMPERATURE	°C (°F)		538.1	548.8	481.0	497.9

EXHAUST SYSTEM





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AIR SYSTEM

A I R	AIR FILTER TYPE		Dry Paper Element			
			50Hz		60Hz	
			PRIME	STANDBY	PRIME	STANDBY
	COMBUSTION AIR FLOW	m <sup>3</sup> /min(cfm)	17.0(600)	18.3(648)	22.1(780)	23.6(833)
MAX. COMBUSTION AIR INTAKE RESTRICTION	kPa	4		4		

## LUBRICATION SYSTEM

Oil Filter Type	Spin-on , Full Flow	
Total Oil Capacity	L(US gal)	30 (7.9)
Oil Pan	L(US gal)	26 (6.9)
Oil Type	CH4 15W-40	

## COOLING SYSTEM

		50Hz	60Hz
Water Pump Type	Centrifugal		
Cooling System Capacity	L	33	33
Radiator Fan Load	kW(hp)	9	15
Radiator Cooling Airflow	m <sup>3</sup> /min(cfm)	370(13066)	482(16951)
External Restriction to Cooling Airflow	Pa(in H <sub>2</sub> O)	125(0.5)	125(0.5)





# TECHNO POWER

Authorized  
**Distributor**  
in UAE



## DSE4520 MKII

### AUTO START AND AUTO MAINS FAILURE CONTROL MODULES

#### (ALTERNATOR FREQUENCY & CAN SPEED SENSING)

DSE4520 MKII



#### KEY FEATURES

- Auto Start and AMF mode in one module (DSE4520 MKII only)
- J1939-75 support and CAN alarm ignore function
- Alternator frequency & CAN speed sensing in one variant
- Largest back-lit icon display in its class (configurable as text display)
- Heated display option
- Real time clock provides accurate event logging
- Fully configurable via the fascia or PC using USB communication
- Extremely efficient power save mode
- 3 phase generator sensing
- 3 phase mains (utility) sensing (DSE4520 MKII only)
- Compatible with 600 V ph to ph nominal systems
- Generator/load power monitoring (kW, kV A, kV Ar, pf)
- Accumulated power monitoring (kW h, kVA h, kVAr h)
- Generator overload protection (kW)
- Generator/load current monitoring and protection
- Fuel and start outputs (configurable when using CAN)
- 4 configurable DC outputs
- 5 V output
- Configurable fuel & crank outputs
- 3 configurable analogue/digital inputs

- 4 configurable digital inputs
- Configurable staged loading outputs
- 3 engine maintenance alarms
- Engine speed protection
- Engine hours counter
- Engine pre-heat
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Tier 4 engine instrumentation screens
- Battery voltage monitoring
- Start on low battery voltage
- Configurable remote start input
- 1 alternative configuration
- Comprehensive warning, electrical trip or shutdown protection upon fault condition
- LCD alarm indication
- Coolant temperature pre-alarm
- Event log (50)
- Fuel solenoid pulling circuit
- On-screen line diagram on/off functionality
- Configurable CAN instrumentation (10)
- Water in fuel digital input
- Tank bund alarm digital input
- Generator at rest output
- ECU periodic wake-up for information retrieval
- Back-light power-save mode
- Adjustable delay crank timer
- Pre/post heat functionality

- Overload protection
- Mains/generator A/C system selection
- Output timer for external audible alarm
- Accommodates a wide range of senders and temperatures

#### KEY BENEFITS

- Ultimate size to feature ratio
- Automatically transfers between mains (utility) and generator (DSE4520 MKII only)
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored simultaneously which are clearly displayed on the largest back-lit icon display in its class
- The module can be configured to suit a wide range of applications
- Uses DSE Configuration Suite PC Software for simplified configuration
- Compatible with a wide range of CAN engines including Tier 4
- Licence-free PC software
- IP65 rating (with optional gasket) offers increased resistance to water ingress

#### SPECIFICATIONS

##### DC SUPPLY

**CONTINUOUS VOLTAGE RATING**  
8 V to 35 V Continuous

##### CRANKING DROPOUTS

Able to survive 0 V for 50 ms, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries. LEDs and backlight will not be maintained during cranking.

##### MAXIMUM OPERATING CURRENT

85 mA at 12 V, 96 mA at 24 V

##### MAXIMUM STANDBY CURRENT

51 mA at 12 V, 47 mA at 24 V

##### MAXIMUM SLEEP CURRENT

35 mA at 12 V, 32 mA at 24 V

##### MAXIMUM DEEP SLEEP CURRENT

<10 uA at 12 V, <10 uA at 24 V

##### MAINS (UTILITY) DSE4520 MKII ONLY

**VOLTAGE RANGE**  
15 V to 415 V AC (Ph to N)  
26 V to 719 V AC (Ph to Ph)

**FREQUENCY RANGE**  
3.5 Hz to 75 Hz

##### OUTPUTS

###### OUTPUT A (FUEL)

10 A short term, 5 A continuous, at supply voltage

###### OUTPUT B (START)

10 A short term, 5 A continuous, at supply voltage

##### AUXILIARY OUTPUTS C, D, E & F

2 A DC at supply voltage

##### GENERATOR

###### VOLTAGE RANGE

15 V to 415 V AC (Ph to N)  
26 V to 719 V AC (Ph to Ph)

**FREQUENCY RANGE**  
3.5 Hz to 75 Hz

##### DIMENSIONS

###### OVERALL

140 mm x 113 mm x 43 mm  
5.5" x 4.4" x 1.7"

###### PANEL CUT-OUT

118 mm x 92 mm  
4.6" x 3.6"

##### MAXIMUM PANEL THICKNESS

8 mm  
0.3"

##### STORAGE TEMPERATURE RANGE

-40 °C to +85 °C  
-40 °F to +185 °F

##### OPERATING TEMPERATURE RANGE

-30 °C to +70 °C  
-22 °F to +158 °F

-40 °C to +70 °C (for heated display variant)  
-40 °F to +158 °F (for heated display variant)



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# TECHNOPOWER Silent Canopy



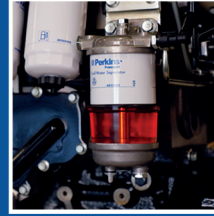
Fuel Inlet/Outlet



Document holder  
Protects documents



Diesel filling with  
key lock



Fuel/water  
separator filter

**Engines** Selected from the heavy duty product and optimized for low quality fuel

**Alternator** 3phase and Single-Phase with AVR(+/-1%)

**Sound proof galvanized canopy** 65dB(A) @7m

**Lockable Snap handles**

**Integrated fuel tank made of Polypropylene** with bounded base for 8hrs. @ full load

**Reinforced anti-rollover forklift tunnels** For safe handling

**Central lifting hook** for easy lifting

**Control panel**  
IP55 Control panel managed by DSE 4520MKII Controller



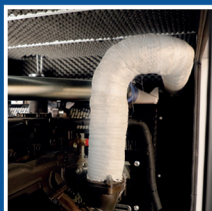
**Easy to service**



**Galvanized metal sheet** to increase strength and durability



**Exhaust terminal pipe** with tilting cap rain over



**Exhaust pipes** with exhaust heat wrap for high-performance and security



**Emergency stop button** It shuts down the generating set immediately



**Anti-vibration pads** attenuate the vibrations caused by the unit



**Oil and Coolant Drain**