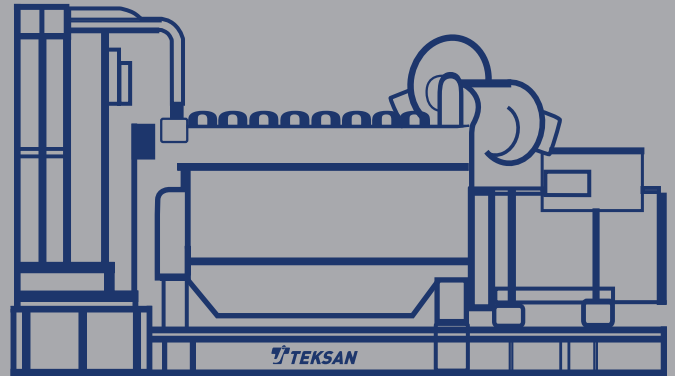


# TJUD500P

## Industrial Diesel Generator Sets

EPA Certified Tier 2 for Stationary Emergency Applications



### Genset Standby Power Rating

<b>Voltage</b>	208/120V	240/120V	480/277V	600/347V
<b>Power</b>	500kW	500kW	500kW	500kW
<b>Phase</b>	3	3	3	3
<b>Pf</b>	0,8	0,8	0,8	0,8
<b>Current</b>	1734A	1503A	751A	600A
<b>Alternator Model</b>	TAL0473D	TAL0473D	TAL0473C	TAL0473C
<b>Temp Rise</b>	125 / 40 °C	125 / 40 °C	125 / 40 °C	125 / 40 °C
<b>Connection</b>	12 Leads WYE	12 Leads DELTA	12 Leads WYE	6 Leads WYE

#### Continuous Power

The maximum power which a generating set is capable of delivering continuously whilst supplying a constant electrical load. Average load can be 100%. The generator must not be overloaded.

#### Prime Power

The maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load. Average load should be 70%. The generator can be overloaded 10% for 1 hour per 12 hrs.

#### Standby Power

The max power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 hrs of operation per year under average of 70% load. Overloading isn't permissible.

### Certifications & Standards

The Generator set is designed and manufactured in a facility certified to **ISO9001:2015, ISO14001:2015, ISO45001-2018** and **ISO10002:2014 standards**.

Generator set is **UL2200, cUL listed** and meets **ISO 8528-5**

The generator set, with its components, are **prototype tested**, factory-built and production tested per UL standards.

The generator set meets **NFPA110 Level 1** when equipped with the necessary accessories and installed per NFPA standards.

### Standard Features - Engine

EPA Certified – Emergency Stationary Only

Heavy-duty, 4-cycle, direct injection

Unit Mounted Radiator

Electronic Isochronous Governor

Fuel – Water Separator Filter

ISO 8528, ISO 3046, BS 5514, DIN 6271 standards

Capable of full rated load acceptance in one step

Low emission and maximum reliability and durability

Heavy Duty Air Cleaner w/Restriction Gauge

Flex Exhaust Connection

### Application Data - Engine

#### Engine

Manufacturer	Perkins
Model	2506C-E15TAG3
Number of Cylinders	6 Vertical Inline
Cycle	4 stroke
Cubic Capacity	15.2 liters
Bore x Stroke	137 mm x 171 mm
Aspiration	Turbocharged, air to air charge cooling
Compression Ratio	16:1
BMEP	2575 kPa
Gross Engine Power	587 kW
Net Engine Power	562 kW
Rated rpm	1800
Speed Variation at Constant Load	±0.25%

#### Fuel Consumption

Standby Power (110% of Prime)	34.9 gal/hr.
Prime Power (100%)	32 gal/hr.
At 75% of Prime	25.4 gal/hr.
At 50% of Prime	20.3 gal/hr.

#### Cooling System

Ambient Capacity of Radiator	122 °F (50 °C)
Total Coolant Capacity	58 liters
Engine Coolant Flow	7.2 liters/sec
Combustion Air Flow	42 m <sup>3</sup> /min
Fan Power	25 kWm
Max Top Tank Temperature	107 °C
Thermostat Operating Range	88 °C to 98 °C

#### Electrical System

Starting Motor Voltage	24V
Battery Charging Alternator	70A
Battery Qty, CCA Rating	2 x 102Ah, 860A

#### Exhaust System

Exhaust Gas Temp	550 °C
Max Allowable Back Pressure	6.8 kPa
Exhaust Gas Flow	112 kg/s
Engine exhaust outlet size (internal)	127 mm

#### Fuel System

Type of Injection System	MEUI
Fuel Injector Pressure	200 Mpa
Governor Type	ECM
Fuel Pump Delivery Pressure	550 kPa
Max Fuel Flow	457 liters/hr

#### Lubrication System

Total lubricating capacity	60 liters
Max Oil Continuous Temperature	114 °C
Oil Consumption @ Full Load (% of fuel)	<0.1%
Pressure at Max No-load Speed	420 kPa

### Standard Features - Alternator

Brushless Single Bearing
125/40 °C Temperature Rise
Class H Insulation
Low waveform distortion with non-linear loads
EC 60034-1; CEI EN 60034-1; NEMA MG 1.22, NF 51- 100,111

AREP Excitation
300% Short Circuit Capability
Low reactance 2/3 pitch windings
Self-ventilated and drip-proof construction
BS 4999-5000; VDE 0530, OVE M-10

### Application Data - Alternator

Manufacturer	Leroy Somer			
Type	4 Poles, Brushless			
Protection	IP 23			
Voltage Regulation	± 0.25%			
One Step Load Acceptance	100% of rated load			
Bearing	Single			
THD in Linear Load	< 5%			
Waveform: NEMA TIF	< 50			
Altitude	≤ 1000 meters			
Over Speed	2250 rpm			
AVR	D350			
Genset Voltage	208/120V	240/120V	480/277V	600/347V
Alternator Model	TAL0473D	TAL0473D	TAL0473C	TAL0473C
Leads	12 Leads WYE	12 Leads DELTA	12 Leads WYE	6 Leads WYE
P.F.	0,8	0,8	0,8	0,8
Power @ Continuous 40 °C	610kVA / 488kW	610kVA / 488kW	625kVA / 500kW	625kVA / 500kW
skVA @ 30% Voltage Dip (P.F. = 0.6)	2130kVA	2130kVA	1560kVA	1000kVA
Efficiency @ 100% load	94,08%	94,08%	94,55%	94,65%
Short Circuit Current @ 100ms	2000A	3465A	1900A	1900A

### Application Data - Circuit Breaker

Genset Voltage	208/120V	240/120V	480/277V	600/347V
ABB (80% Rated) Breaker Model	E2.2N-A 2000	E2.2B-A 1600	T6N 800	T5N 600
Current Rating (In)	2000A	1600A	800A	600A
Trip Unit	LI	LI	LS/I	LS/I

# TJUD500P

## Industrial Diesel Generator Sets



### Control Panel

Manufacturer	DSE - Deep Sea Electronics
Model	7310 MKII
DC Supply	8 to 35V Continuous
Generator Voltage Range (Ph-Ph)	26V to 719V AC
Generator Frequency Range	3,5Hz to 75Hz
Standards	BS EN 61000-6-2, BS EN 61000-6-4, BS EN 60950, BS EN 60529 BS EN 60068-2-1, BS EN 60068-2-2 BS EN 60068-2-6, BS EN 60068-2-30 BS EN 60068-2-78, BS EN 60068-2-27



#### Key Features

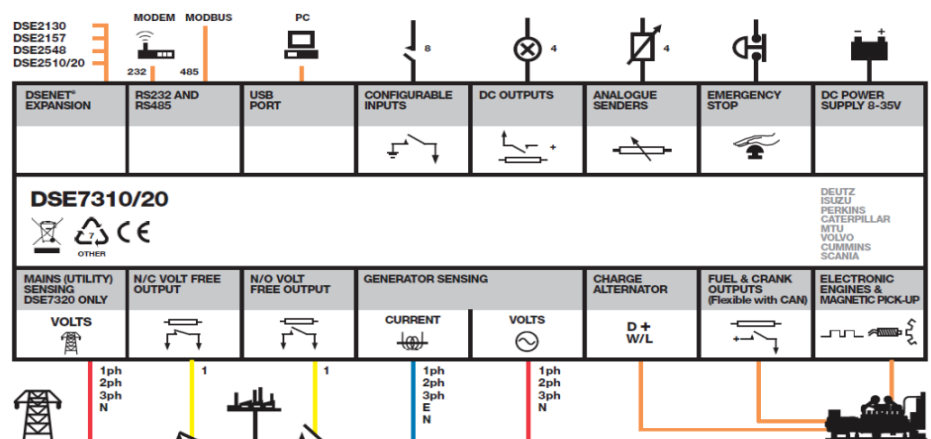
- License free PC software
- 4-Line back-lit LCD text display
- Five key menu navigation
- LCD Alarm Indication
- DSENet expansion compatibility
- Internal PLC editor
- Protection disable feature
- Data logging facility
- Fully configurable via PC
- Front panel configuration
- Power safe mode
- 6 configurable DC outputs
- 2 configurable volt free relay outputs
- 6 configurable analogue/digital inputs
- 8 configurable digital inputs
- Configurable 5 stage dummy load and load shedding outputs
- Backed up real time clock
- Fuel usage monitor and low fuel level alarms
- Remote SCADA monitoring via DSE Configuration Suite PC Software
- Advanced SMS messaging (additional external model required)
- Start & Stop capability via SMS messaging
- Configurable event log (250)
- Multiple date and time scheduler

#### Protections

- ✓ Gen. Voltage – under / over
- ✓ Gen. Freq. – under / over
- ✓ Engine Speed – under / over
- ✓ Engine Oil Pressure – low
- ✓ Engine Temp – low / high
- ✓ Battery Voltage – low / high
- ✓ Weak Battery
- ✓ Fail to Start / Stop
- ✓ Charge Alternator Fail
- ✓ Over Current & Load (kW/kVAR)
- ✓ Unbalanced Load
- ✓ Independent Earth Fault
- ✓ Reverse Power
- ✓ Loss of Speed Signal

#### Instruments

- ✓ Gen. Voltage (L-L/L-N)
- ✓ Gen. Frequency
- ✓ Engine speed
- ✓ Oil Pressure
- ✓ Water Temperature
- ✓ Battery Voltage
- ✓ Run Time
- ✓ Phase Sequence
- ✓ Power monitoring (kWh/kVAh/kVArh)
- ✓ Power (kWh/kVAh/kVArh)
- ✓ Power Factor
- ✓ Generator Current
- ✓ Generator Load (%)
- ✓ Earth Current



# TJUD500P

## Industrial Diesel Generator Sets



### Standard Features - General

Heavy duty structural steel base frame  
Battery charger  
Jacket Water Heater  
Oil & Coolant Drain Extensions  
Operations Manual

Critical grade silencer  
Battery tray and cables  
Heater Isolation Valves  
Rubber vibration Isolator  
Standby Limited Warranty

### Battery Charger

Manufacturer	DSE
Model	9470 MKII
Operation Voltage (L-N)	90V to 305V
Output Current	10A

### Jacket Water Heater

Manufacturer	Hotstart
Model	CTM25210-N00
Operation Voltage	240V
Power	2500W

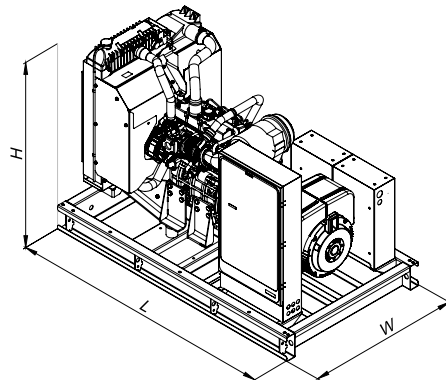
### Dimensions, Weights & Sound Levels

	L x W x H (inches)	Weight (lbs)	Sound Level *
Open Skid	203 x 69 x 82	7950	-
Level 2 Enclosure	256 x 70 x 101	10400	TBA
Level 3 Enclosure	TBA	TBA	TBA

\*All measurements are approximate and for estimation purposes only. \* Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at stand-by power rating

### Fuel Tank (UL142 Listed – Option)

Size	L x W x H (inches)	Weight (lbs)
850gal /24hr	250 x 69 x 18	3200
1720gal / 48hr	250 x 69 x 33	4200
2550gal / 72hr	328 x 69 x 36	5500



### Sound Attenuated Enclosure (Option)

Compatible with 2000/14/EC directives,  
Factory built, UL Certified  
Amplified paint against corrosion and rust  
Exceeds 2000hours salt spray test  
Level 2 / 3 Sound Level Compliant  
Heavy Duty Steel / Aluminum Structure  
High performance sound absorb material  
Vertical air discharge  
Exhaust muffler inside the canopy



### Available Options

#### Circuit Brakers

- Magnetic Trip
- Thermal Magnetic Trip
- Electronic Trip LS/I
- Electronic Trip LSI
- Electronic Trip LSIg
- 80% Rating
- 100% Rating
- Electrically Operated CB (paralleling)
- Shunt Trip – wired to controller
- Auxiliary Contact – volt free contact

#### Alternator

- Upsize Alternator
- Space Heater
- RTD Sensors

#### Electrical

- GFCI Receptacle Outlet
- Load Center
- Power Outlet (14-50R, 120/240V, 50A)
- Power Outlet (TT30R, 120V, 30A)
- Power Outlet Panel (120/240V, 80A) NEMA5-20R, NEMA14-50R, TT-30R
- Surge Protector

#### Control System

- Remote Annunciator Panel – 8 lights
- Remote Annunciator Panel – 16 lights
- Remote Annunciator Panel – 24 lights
- Common Alarm Relay – V free contact
- Generator Run Relay – V free contact
- Control Panel Heater
- Dry Contacts Expansion Relay
- Remote E-Stop Switch
- Remote E-Stop Switch – Break Glass
- Remote Monitoring (DSE892 SNMP)
- Remote Monitoring (DSE890 Webnet)
- Paralleling System Upgrade
- Manual Voltage Adjust
- Manual Speed Adjust

#### Miscellaneous

- ATS Panel
- Rated Power Factor Factory Testing
- Enclosure Heater
- Oil Pan Heater
- Spring Isolators
- Crankcase Ventilation Filter
- Critical Silencer Set w/Open Skid Unit

#### Enclosures

- Sound Attenuated Level 2
- Sound Attenuated Level 3
- Enclosure DC light w/timer
- Enclosure AC light
- Enclosure Space Heater
- Motorized Air Inlet Damper
- Gravity Radiator Louver

#### Fuel Tank

- UL142 Listed
- UL2085 Listed
- Fuel Level Display on Controller
- Fuel / Water Separator

#### Battery System

- Starting Batteries
- Battery Charger (NFPA110 Compliant)
- Battery Wrap Heater
- Battery Restraint
- Battery Disconnect Switch

#### Warranty

- 5 Years Extended Limited Warranty

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