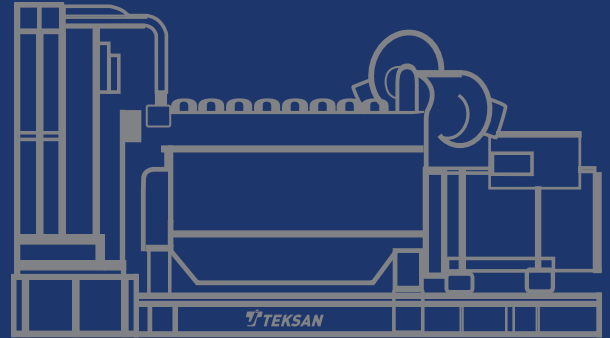


TJUD450P

Industrial Diesel Generator Sets

EPA Certified Tier 3 for Stationary Emergency Applications



Genset Standby Power Rating

125/40 °C Standby Ratings

Alternator Model			TAL0473D	TAL0473C	TAL0473B	LSA47.3 M7	LSA47.3 S5
Voltage	Phase	Pf	kW / A	kW / A	kW / A	kW / A	kW / A
480/277V Δ	3	0,8	460 / 691	460 / 691	455 / 684	460 / 691	455 / 684
208/120V Δ	3	0,8	460 / 1596	444 / 1540		460 / 1596	
240/120V Δ	3	0,8	460 / 1383	440 / 1335		460 / 1383	
Alternator Model			TAL0473B			LSA47.3 S5	
600/347V Δ	3	0,8	455 / 547			455 / 547	

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.

TJUD450P

Industrial Diesel Generator Sets



Standard Features – Engine

EPA Certified Tier 3 – Emergency Stationary Only

Unit Mounted Radiator

Oil and Coolant Drain Extension w/Valve

Fuel – Water Separator Filter

Speed Control to ISO 8528, G3

24V Battery System & Cables

Flex Fuel Connectors

Flex Exhaust Connection

Application Data – Engine

Manufacturer	Perkins
Model	2506D-E15TAG1
Cubic Capacity	15.2 liters
Bore x Stroke	137 mm x 171 mm
Compression Ratio	16.0:1
Aspiration	Turbocharged, air to air charge cooling
Gross Engine Power	514 kW
Net Engine Power	490 kW
BMEP	2284 kPa
Speed Variation at Constant Load	±0.25%
Governor Type	Electronic
Battery Charging Alternator	24V, 70A
Battery Qty, CCA Rating	2 × 102Ah, 860A
Ambient Capacity of Radiator	122 °F (50 °C)
Total Coolant Capacity	58 liters
Thermostat Operating Range	88 °C to 98 °C
Combustion Air Flow	41.5 m ³ /min
Exhaust Gas Temp	550 °C
Max Allowable Back Pressure	6.8 kPa
Total lubricating capacity	62 liters

Fuel Consumption

Standby Power (110% of Prime)	33.3 g/h (114 l/h)
Prime Power (100%)	29.9 g/h (100 l/h)
At 75% of Prime	24.6 g/h (77 l/h)
At 50% of Prime	17.7 g/h (57 l/h)

TJUD450P

Industrial Diesel Generator Sets



Standard Features – Alternator

Brushless Single Bearing

Class H Insulation

Low reactance 2/3 pitch windings

IEC 60034, NEMA MG 1.32-33, ISO8528-3

AREP+ Excitation

Digital Automatic Voltage Regulator

100% of Rated Load – One Step

CSA C22.2 n°100-14, UL 1446 Compliant

Application Data – Alternator

Manufacturer	Leroy Somer
Type	4 Poles, Brushless
Bearing	Single
Protection	IP 23
AVR	D350
Voltage Regulation (**)	± 0.25%
AREP+/PMG Short Circuit Current	TAL:2.7 IN: 10 s / LSA:300% (3 IN): 10 s (*)
One Step Load Acceptance	100% of rated load
Altitude	≤1000 meters
Over Speed	2250 rpm
THD (***) in no-load	< 2%
THD (***) on linear load	< 5%
Waveform: NEMA = TIF (***)	< 50
Waveform: I.E.C. = FHT (***)	< 2%

(*) D350: 10 seconds (**) Steady state (***) Total harmonic distortion between phases, no-load or on-load (non-distorting)

Motor starting (AREP+) Locked rotor kVA at P.F. = 0.6, 480V – 60Hz

Alternator Model	TAL0473D	TAL0473C	TAL0473B	LSA47.3 M7	LSA47.3 S5
%30 Voltage Drop	1620kVA	1600kVA	1600kVA	1750kVA	1750kVA

(-)For a starting P.F. other than 0.6, the starting kVA must be multiplied by $K = \text{Sine P.F.} / 0.8$

(-)For voltages other than 400V (Y), 230V (Δ) at 50 Hz, then kVA must be multiplied by $(400/U)^2$ or $(230/U)^2$.

Application Data – Circuit Breaker

Genset Voltage	480/277V ∟	208/120V ∟	240/120V ∟	600/347V ∟
ABB Breaker Model	XT6N800-800A	E2.2B-A 1600A	E2.2B-A 1600A	XT5N600-600A

TJUD450P

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

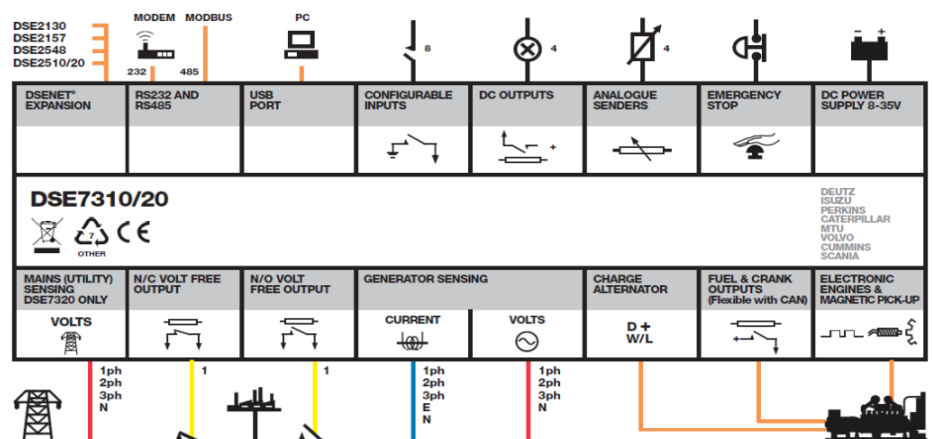
- License free PC software
- 4-Line back-lit LCD text display
- Five key menu navigation
- LCD Alarm Indication
- DSENet expansion compatibility
- Internal PLC editor
- Protection disable feature
- Data logging facility
- Fully configurable via PC
- Front panel configuration
- Power safe mode
- 6 configurable 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



TJUD450P

Industrial Diesel Generator Sets



Standard Features – General

UL 2200 & cUL Listed	NFPA-110, Level 1 Compliant (*)
Main Line Circuit Breaker Mounted & Wired	Jacket Water Heater w/Isolation Valves
Vibration Isolation Mounts	Battery Charger & Starter Battery
Aluminized Steel Silencer	2 Year / 2000 Hours Standby Warranty

Battery Charger

DSE Model	9470 MKII
Operation Voltage (L-N)	90V to 305V
Output Volts/Current	24V / 10A

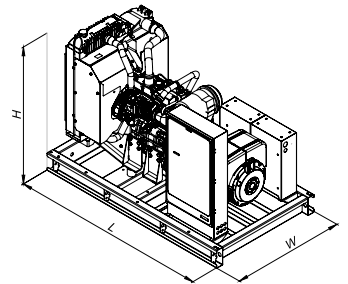
Jacket Water Heater

Hotstart Model	CKM1040260-000
Operation Voltage	240V
Power	4000W

Dimensions, Weights & Sound Levels

Open Set

Fuel Tank Capacity	Run Time (hr)	L in(mm)	W in(mm)	H in(mm)	Weight lbs(kg)
No Tank	-	155" (3940)	69" (1750)	78" (1980)	7,875 (3,570)
850gal	24	177" (4500)	69" (1750)	104" (2660)	12,375 (5,610)
1700gal	48	TBA	TBA	TBA	TBA
2550gal	72	TBA	TBA	TBA	TBA



Sound Attenuated Enclosure Level 2

Fuel Tank Capacity	Run Time (hr)	L in(mm)	W in(mm)	H in(mm)	Weight lbs(kg)		Sound Level dBA(**)
					Steel	Aluminum	
No Tank	-	220.7" (5605)	71.1" (1806)	102" (2590)	10,805 (4,900)	8,645 (3,920)	TBA
850gal	24	239.6" (6086)	71.1" (1806)	121" (3070)	15,305 (6,940)	13,145 (5,960)	
1700gal	48	TBA	TBA	TBA	TBA	TBA	
2550gal	72	TBA	TBA	TBA	TBA	TBA	

Sound Attenuated Enclosure Level 3

Fuel Tank Capacity	Run Time (hr)	L in(mm)	W in(mm)	H in(mm)	Weight lbs(kg)		Sound Level dBA(**)
					Steel	Aluminum	
No Tank	-	TBA	TBA	TBA	TBA	TBA	TBA
850gal	24	TBA	TBA	TBA	TBA	TBA	
1700gal	48	TBA	TBA	TBA	TBA	TBA	
2550gal	72	TBA	TBA	TBA	TBA	TBA	

(*)Generator set meets NFPA-110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.

(**)Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at stand-by power rating

- All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact Teksan for detailed installation drawings

TJUD450P

Industrial Diesel Generator Sets



Available Options

Circuit Breakers

- 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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