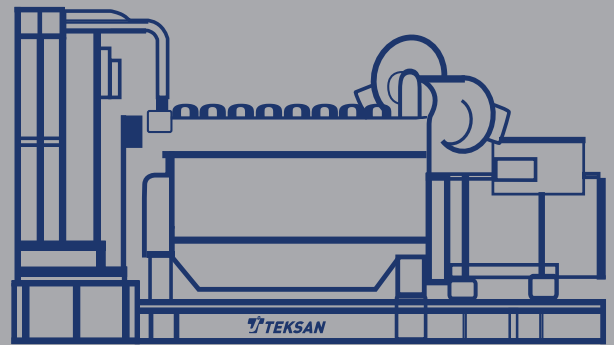


TJUG450PD

Industrial Gaseous Generator Sets



Genset Standby Power Rating

Voltage	208/120V	240/120V	480/277V	600/347V
Phase	3	3	3	3
Pf	0,8	0,8	0,8	0,8
Standby kWe (NG)	450kW	450kW	455kW	455kW
Standby Amps (NG)	1561A	1353A	684A	547A
Standby kWe (LP)	300kW	300kW	300kW	300kW
Standby Amps (LP)	1040A	902A	451A	360A
Alternator Model	TAL0473C	TAL0473C	TAL0473B	TAL0473B
Temp Rise	125 / 40 °C	125 / 40 °C	125 / 40 °C	125 / 40 °C
Connection	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.

Application Data - Engine

Engine	
Manufacturer	PSI
Model	21.9L
Number of Cylinders	V-12
Cycle	4
Cubic Capacity	21.9 liters
Bore x Stroke	128 mm
Stroke	142 mm
Aspiration	Turbo Charge Air Cooled
Combustion Ratio	10.5:1
Gross Standby Power Rating at the Flywheel - NG	510 kW
Gross Standby Power Rating at the Flywheel - LP	352 kW
Rated rpm	1800
Speed Regulation	±0.5%

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

Fuel System	
Fuel Type	NG, LP Vapor or Dual Fuel
Maximum EPR Rated Pressure	1 psi (6.9 kPa)
Fuel Supply Pressure to EPR	7.0 - 11.0 inH2O
Minimum NG Supply Pipe Size	2 x 1-1/4" NPT
Minimum LPG Supply Pipe Size	2 x 1-1/4" NPT

Air Induction System	
Combustion Air Required	635 cfm
Max. Allowable Intake Air Restriction - Clean	5.0 inH2O
Max. Allowable Intake Air Restriction - Dirty	15.0 inH2O

Fuel Consumption - NG	
Standby Power (100%)	140.0 m3/hr (4944 CFH)
At 75% of Standby	110.0 m3/hr (3885 CFH)
At 50% of Standby	84.0 m3/hr (2966 CFH)

Fuel Consumption - LP	
Standby Power (100%)	40.0 m3/hr (1412 CFH)
At 75% of Standby	34.0 m3/hr (1200 CFH)
At 50% of Standby	24.0 m3/hr (847 CFH)

Cooling System	
Ambient Capacity of Radiator	122 °F (50 °C)
Coolant Capacity - Engine Only / Total	44 liters / 190 liters
Max External Coolant Friction Head	40 kPa
Fan Power	31 kW
Engine Coolant Flow	570 liters/min
Cooling Fan Air Flow	1133 m3/min
Cracking Temperature	71 °C
Full Open Temperature	85 °C

Exhaust System	
Type	Water Cooled Manifold
Turbine Outlet Temperature	1136 °F (614 °C)
Catalyst Dp	5.1 kPa
Maximum allowable Back pressure	10.2 kPa
Exhaust Flow at Turbine Outlet Conditions	80 m3/min

Lubrication System	
Oil Specification	SAE 15W-40 Low Ash Gas engine oil, API CD/CF or higher
Maximum Allowable Oil Temperature	121 °C
Engine Oil Capacity	33 liters

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	TAL0473C	TAL0473C	TAL0473B	TAL0473B
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	555kVA / 444kW	555kVA / 444kW	570kVA / 456kW	570kVA / 456kW
skVA @ 30% Voltage Dip (P.F. = 0.6)	1900kVA	2100kVA	1560kVA	1000kVA
Efficiency @ 100% load	94,08%	94,08%	94,55%	94,65%
Short Circuit Current @ 1000ms	2000A	3290A	1800A	1800A

Application Data - Circuit Breaker

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

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Industrial Gaseous 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

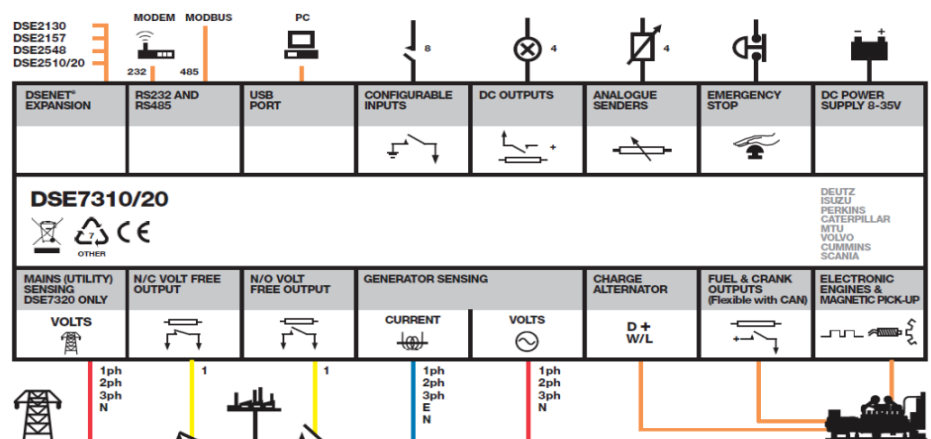
- License free PC software
- 4-Line back-lit LCD text display
- Five key menu navigation
- LCD Alarm Indication
- DSENet expansion compatibility
- Internal PLC editor
- Protection disable feature
- Data logging facility
- Fully configurable via PC
- Front panel configuration
- Power safe mode
- 6 configurable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



TJUG450PD

Industrial Gaseous 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

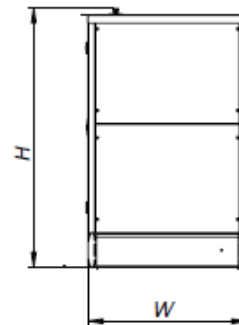
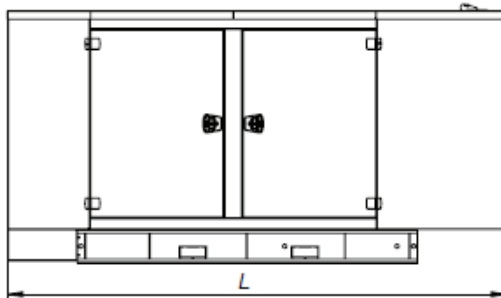
Jacket Water Heater

Manufacturer Hotstart
 Model CKM1030260-000
 Operation Voltage 240V
 Power 3000W

Dimensions, Weights & Sound Levels

	L x W x H (inches)	Weight (lbs)	Sound Level *
Open Skid	TBA	TBA	-
Level 2 Enclosure	TBA	TBA	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



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

- Dual Fuel Operation
- Fuel Pressure Low, Alarm
- Fuel Filter
- Gas Regulator

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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