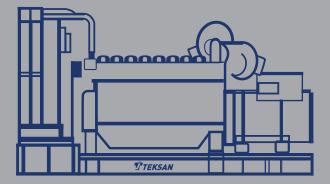
Industrial Gaseous Generator Sets







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) | 300kW | 300kW | 300kW | 300kW |
| Standby Amps (NG) | 1040A | 902A | 451A | 360A |
| Standby kWe (LP) | 200kW | 200kW | 200kW | 200kW |
| Standby Amps (LP) | 693A | 601A | 300A | 240A |
| Alternator Model | TAL046H | TAL046H | TAL046G | TAL046G |
| 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.

Industrial Gaseous Generator Sets

TEKSAN

Application Data - Engine

| Engine | |
|--|-------------------------|
| Manufacturer | PSI |
| Model | 14.6L |
| Number of Cylinders | V-8 |
| Cycle | 4 |
| Cubic Capacity | 14.6 liters |
| Bore x Stroke | 128 mm |
| Stroke | 142 mm |
| Aspiration | Turbo Charge Air Cooled |
| | 10 5 1 |
| Combustion Ratio | 10.5:1 |
| Combustion Ratio Gross Standby Power Rating at the Flywheel - NG | 10.5:1 340 kW |
| Gross Standby Power Rating at the | |
| Gross Standby Power Rating at the Flywheel - NG Gross Standby Power Rating at the | 340 kW |
| Gross Standby Power Rating at the Flywheel - NG Gross Standby Power Rating at the Flywheel - LP | 340 kW 240 kW |

| 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 | 6.8 - 10.9 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 inH20 |
| Max. Allowable Intake Air Restriction - Dirty | 15.0 inH20 |

| Fuel Consumption - NG | |
|-----------------------|-----------------------|
| Standby Power (100%) | 92.0 m3/hr (3249 CFH) |
| At 75% of Standby | 72.0 m3/hr (2543 CFH) |
| At 50% of Standby | 52.0 m3/hr (1836 CFH) |
| | |

| Fuel Consumption - LP | |
|-----------------------|----------------------|
| Standby Power (100%) | 26.5 m3/hr (936 CFH) |
| At 75% of Standby | 22.0 m3/hr (777 CFH) |
| At 50% of Standby | 15.5 m3/hr (547 CFH) |

Cooling System

| Ambient Capacity of Radiator | 122 °F (50 °C) |
|--|------------------------|
| Coolant Capacity - Engine Only / Total | 36 liters / 120 liters |
| Max External Coolant Friction Head | 40 kPa |
| Fan Power | 16 kW |
| Engine Coolant Flow | 525 liters/min |
| Cooling Fan Air Flow | 849 m3/min |
| Cracking Temperature | 71 °C |
| Full Open Temperature | 85 °C |

| Exhaust System | |
|--|-----------------------|
| Туре | Water Cooled Manifold |
| Turbine Outlet Temperature | 1030 °F (554 °C) |
| Catalyst Dp | 5.1 kPa |
| Maximum allowable Back pressure | 10.2 kPa |
| Exhaust Flow at Turbine Outlet Conditions | 58 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 | 25 liters |

Industrial Gaseous Generator Sets



Standard Features - Alternator

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

Application Data - Alternator

| Manufacturer | | | | Leroy Somer |
|-------------------------------------|----------------|----------------|----------------|--------------------|
| Туре | | | | 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 | | | | \leq 1000 meters |
| Over Speed | | | | 2250 rpm |
| AVR | | | | D350 |
| Genset Voltage | 208/120V | 240/120V | 480/277V | 600/347V |
| Alternator Model | TAL046H | TAL046H | TAL046G | TAL046G |
| 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 | 375kVA / 300kW | 375kVA / 300kW | 406kVA / 325kW | 406kVA / 325kW |
| skVA @ 30% Voltage Dip (P.F. = 0.6) | 1365kVA | 1365kVA | 1025kVA | 655kVA |
| Efficiency @ 100% load | 93,50% | 93,50% | 93,90% | 94,07% |
| Short Circuit Current @ 1000ms | 1400A | 2425A | 1300A | 1300A |

AREP Excitation

300% Short Circuit Capability

Low reactance 2/3 pitch windings

BS 4999-5000; VDE 0530, OVE M-10

Self-ventilated and drip-proof construction

Application Data - Circuit Breaker

| Genset Voltage | 208/120V | 240/120V | 480/277V | 600/347V |
|-------------------------------|----------|----------|----------|----------|
| ABB (80% Rated) Breaker Model | T7S 1200 | T7S 1000 | T5N 600 | T5N 400 |
| Current Rating (In) | 1200A | 1000A | 600A | 400A |
| Trip Unit | LS/I | LS/I | LS/I | LS/I |

Industrial Gaseous Generator Sets



Control Panel

| Manufacturer |
|---------------------------------|
| Model |
| DC Supply |
| Generator Voltage Range (Ph-Ph) |
| Generator Frequency Range |
| |

Standards

| 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 alarn |
| Remote SCADA monitoring via DSE Configuration Suite PC Software |
| Advanced SMS messaging (additional |

Advanced SMS messaging (additional external model required)

Start & Stop capability via SMS messaging

ns

Configurable event log (250)

Multiple date and time scheduler

| 7310 MKII |
|------------------------------------|
| 8 to 35V Continuous |
| 26V to 719V AC |
| 3,5Hz to 75Hz |
| 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 |
| |

DSE - Deep Sea Electronics

Protections

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



| Instruments |
|-------------------------------------|
| √ Gen. Voltage (L-L/L-N) |
| ✓ Gen. Frequency |
| \checkmark 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 |

| DSE2130 DSE2157 DSE2548 DSE2510/20 | MODEM MODBUS | |] 。 | ⊗ . | ₫. | | |
|--|---|-------------|-----------------------------|------------------------|---------------------|--|--------------------------|
| DSENET [®] EXPANSION | RS232 AND RS485 | USB PORT | CONFIGURABLE INPUTS | DC OUTPUTS | ANALOGUE SENDERS | EMERGENCY STOP | DC POWER SUPPLY 8-35V |
| | | | £,∠ੈ | <u>t_</u> , | - \ | Ŧ | |
| DSE7310/20 DSE7300/20 DSE730 | | | | | | ISUZU PERKINS CATERPILLAR MTU VOLVO CUMMINS | |
| MAINS (UTILITY) SENSING DSE7320 ONLY | SENSING OUTPUT FREE OUTPUT ALTERNATOR OUTPUTS ENGINES & | | | | | | |
| VOLTS | ţŗ | Į, | | | D+ W/L | ţļ | |
| 1pl 2pl 3pl N | h l | | 1ph 2ph 3ph E N | 1ph 2ph 3ph N | | | |

Industrial Gaseous Generator Sets



Standard Features - General

| Heavy duty structural steel base frame | Critical grade silencer |
|--|---------------------------|
| Battery charger | Battery tray and cables |
| Jacket Water Heater | Heater Isolation Valves |
| Oil & Coolant Drain Extensions | Rubber vibration Isolator |
| Operations Manual | Standby Limited Warranty |

Battery Charger

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

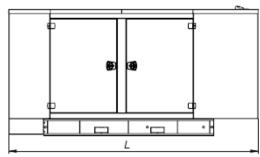
Jacket Water Heater

| 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 | ТВА | TBA | - |
| Level 2 Enclosure | ТВА | TBA | TBA |
| Level 3 Enclosure | ТВА | 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

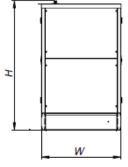
Level 2 / 3 Sound Level Compliant

Heavy Duty Steel / Aluminum Structure

High performance sound absorb material

Vertical air discharge

Exhaust muffler inside the canopy





Industrial Gaseous Generator Sets

TEKSAN

Available Options

Circuit Brakers

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

Alternator

- □ Upsize Alternator
- \Box 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 – Break Glass
Remote Monitoring (DSE892 SNIMP)
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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