

High Power Range



POWER (PRP / ESP):
1809 / 2012 kVA (1447 / 1610 kW)



EMISSIONS LEVEL:
EU Stage 0



FREQUENCY
50Hz



VOLTAGE
400/230V



CE CERTIFIED



DGC 2000 ST

1. General technical data

1.1. Version, dimensions and weight

Version	Open
Dimensions	11KRS
L (mm)	5900
W (mm)	2210
H (mm)	3239*
Weight with liquids and without fuel (kg)	14000

1.2. Main technical data

Engine	CUMMINS KTA50-G23
Alternator	STAMFORD S7L1D-F
Fuel	Diesel
Type of execution	G2
Control panel	DSE 7320 MKII
Tank (l)	N/A
Sound level-Lp(A) (dB(A)@1m) ¹	N/A (Indoor)
Sound level-Lp(A) (dB(A)@7m) ¹	N/A (Indoor)
Sound power-LW(A) (dB(A))	N/A (Indoor)

¹The sound levels may vary depending on the measurement conditions.

Voltage	PRP ² (KVA/KW)	ESP ² (KVA/KW)	PRP Amperage (A)	ESP Amperage (A)
400/230V	1809 / 1447	2012 / 1610	2611,1	2904,1

¹PRP: Continuous power ("Prime Power"). ESP: Emergency Standby Power according to ISO8528-1.

Tolerance of maximum active power (kW) ±5%

Directives and Regulations

ENVIRONMENTAL CONDITIONS STANDARD ISO 8528-1:2018: 25°C, 100kPa and 30% relative humidity:

- **Prime Power (PRP):** Data on electrical power available at variable load without limit of hours per year. An overload of 10% is allowed for 1h out of 12. According to ISO 8528-1:2018.
- **Emergency Standby Power (ESP):** Data on electrical capacity available at variable load in case of emergency according to ISO 8528-1:2018.

The DAGARTECH Generator bears the CE marking which includes the following directives:

- **2006/42/EC.** Machine Safety Directive.
- **EN ISO 8528-13:2016.** Part 13: Safety. Alternating current generators powered by reciprocating internal combustion engines.
- **2014/30/EU.** Electromagnetic Compatibility Directive.
- **2000/14/EC.** Noise Emissions Directive. Sound power levels evaluated in accordance with the procedure laid down in the directive.
- **Directive 2011/65/EU** on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS 2).

* Confirm the height of the unit. This measurement may vary depending on the height of the radiator.

400/230V · 50Hz (1500 rpm)

CUMMINS KTA50-G23 | STAMFORD S7L1D-F

2. Engine specifications

2.1. General technical data of the engine

Make and model	CUMMINS KTA50-G23
Emissions	EU Stage 0
r.p.m.	1500
Maximum ESP power (kWm)	1683
Power PRP (kWm)	1510
Fuel	Diesel
No. of cylinders	16
Cylinder capacity (c.c.)	50300
Compression ratio	14,7
Cooling system	Water-cooled
Type of regulation	Electronic
Type of engine/injection/suction	Diesel / direct / Turbocharged
Number of exhaust outlets	2
Number of exhaust silencers	1

2.2. Fuel

Type of fuel	Diesel
Tank capacity	N/A

2.3. Consumption and autonomy

Consumption (l/h)		Autonomy (h)	
PRP	ESP	PRP	ESP
50%	205	-	-
75%	289	-	-
100%	380	424	N/A

2.4. Cooling system

Fan flow (m³/s)	35
Radiator back pressure (mm H₂O)	13
Fan power consumption (kW)	55
Total refrigerant capacity (l)	516

2.5. Lubrication system

Oil capacity (l)	178
Oil consumption (N/A)	N/A

2.6. Intake system

Combustion air intake flow (l/s)	2261
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CUMMINS KTA50-G23 | STAMFORD S7L1D-F

2.7. Starter system	No. of batteries	4	
	Battery characteristics	12V 44Ah	
	Start-up voltage (V)	24V	
2.8. Exhaust system	Exhaust gas flow (l/s)	5100 [PRP]	5521 [ESP]
	Exhaust gas temperature (°C)	477 [PRP]	508 [ESP]
	Exhaust outside diameter (mm)	6" (Ø 152,4)	
	Max. exhaust back pressure (in Hg)	2	

3. Alternator specifications

3.1.
General
technical
data of the
alternator

Make and model	STAMFORD S7L1D-F			
No. of poles	4			
Insulation class	H			
No. of threads	6			
Mechanical protection index	IP23			
Voltage Regulator (AVR)	MX321+PMG			
Voltage regulation	±1%			
ESP power 27°C (kVA)	2035			
Power PRP 40°C (kVA)	1900			
No. of phases	3			
Power factor (cos φ)	0,8			
	Performance η (%)			
	50%	75%	100%	110%
	96,1%	96,2%	95,8%	95,6%

i Standard regulations that the alternator meets:
 CEI 2-3 | IEC 34-1 | EN 60034-1 | VDE 0530 | BS 4999-5000 | CAN/CSA-C22.2-No 100-95.
Low wave distortion: THD (100% load) = 2% | THF < 2%
 Complies with: EN61000-6-3, EN61000-6-2 regarding radio interference.

4. Bench Specifications

- Unit mounted on **electro-welded high-resistance steel bench**, painted with epoxy-polyester powder paint. Equipped with **retention bath**.
- Connection of the assembly to the bench by means of **anti-vibration dampers**.
- Without fuel tank.**
* CHECK AVAILABLE INTEGRATED TANK OPTIONS DEPENDING ON THE MODEL.
- Tested in a salt spray chamber according to **ASTM B-117-09, resistance 500h**.

6. Control panel

6.1. Main elements of the control panel

- Protection panel, distribution with **automatic control module** which allows you to work in manual, automatic or signal mode.
- Push button** for **emergency stop**.
- Deep Sea Electronics battery charger**, designed to be permanently connected to the battery and maintain 100% of the charge. The charger switches to float mode when charging is complete:

Model	DSE BC2405 24V, 5A
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Protections:

- 4-pole magnetothermic protection** against overloads and short circuits.
- Protection fuses** for the control set.

6.2. Circuit breaker

Model	Schneider ComPact 3200A 4P
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6.3. Control module



1. 4 configurable indicator LEDs	8. Manual mode
2. Generator on load	9. Genset stop
3. Transfer to the generator (manual mode)	10. MAIN NETWORK transfer (manual mode)
4. Start engine (manual mode)	11. Network on load
5. Silence alarm	12. Navigation keyboard
6. Automatic mode	13. Main status and instrument display
7. Test mode	

Model	DSE 7320 MKII
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DEEP SEA, DSE 6020 MKII control board automatically switches the genset on when an outage is detected in the electrical grid and automatically switches off when the supply of electricity is restored.

It can also operate in manual and signal mode. Makes it possible to monitor a large number of engine parameters and to display information, status and alarm alerts.

The module includes USB communication ports, 4 configurable digital inputs, 3 analogue inputs, 6 configurable outputs, emergency button, 8-35 V battery charger.

Equipped with a 132x64 pixels LCD illuminated display with 4 lines of text, 5 menu navigation keys, programmable clocks and alarms, parameter reading and display with RMS values.

The entire module can be easily set up from a PC using the specific DSE settings software.

Different operating modes: AUTOMATIC mode, MANUAL mode, SIGNAL mode and TEST mode.

Other alternative settings available on request extending the options available as part of the work system.



Environmental Tests that the module passes:

BS EN 61000-6-2 (electromagnetic compatibility) | BS EN 61000-6-4 (electromagnetic compatibility) | BS EN 60950 (electrical safety) | BS EN 61000-6-2 (temperature) | BS EN 60068-2-6 (vibrations) | BS EN 60068-2-27 (shock)

400/230V - 50Hz (1500 rpm)

BAUDOUIN 6M33G750/5 | MECCALTE ECO40 VL4 B

6.3. Control module


Standard ✓

Model
DSE 7320 MKII

Operating modes

STOP mode	✓
MANUAL mode	✓
TEST mode	✓
AUTO mode	✓

Module configuration options

PC	✓
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Generator readings

Generator voltage (F-F)	✓
Generator voltage (F-N)	✓
Generator current (A)	✓
Generator frequency	✓
Generator load F-N (kW / kVA / kVAr)	✓
Total generator load (kW / kVA / kVAr)	✓
Average generator power factor	✓
Accumulated generator load (kW, kVAh, kWh, kVAh)	✓

Network readings

Network voltages (ph-N)	✓
Network voltages (ph-ph)	✓
Grid frequency	✓
Network current (A)	□
Network load ph-N (kW / kVA / kVAr)	□
Total network load (kW / kVA / kVAr)	□

Engine readings

Coolant temperature	✓
Oil pressure	✓
Engine fuel level	✓
Engine battery volts	✓
Engine speed	✓
Engine run time	✓

Caption

✓ Included	□ Optional
✗ Not available	ℹ Consult

Readings available at control module level.

Confirm the availability of these readings for this generator and engine.

Ask us for further readings in generating sets equipped with electronically managed engines and DSE 7320MKII control module.



DO YOU WANT A SUPERIOR PERFORMANCE CONTROL MODULE?

Contact us and tell us what you need.

400/230V - 50Hz (1500 rpm)

CUMMINS KTA50-G23 | STAMFORD S7L1D-F

6.3. Control module


Standard ✓

Model
DSE 7320 MKII

Engine protections

High water temperature	✓
Low oil pressure	✓
Low water level	✓
Fuel reserve by sensor	✓
Second fuel tank control	✓
Shutdown failure	✓
Battery voltage failure	✓
Battery charge alternator failure	✓
Overspeed	✓
Underfrequency	✓
Failure to start	✓
Emergency stop	✓
Maintenance notice	✓
Maintenance Alert	✓

Alternator protections

High frequency	✓
Low frequency	✓
High voltage	✓
Low voltage	✓
Short circuit	✓
Asymmetry between phases	□
Incorrect phase sequence	✓
Reverse power	✓
Breaker Trip 4 poles	□
Overpressure alarm	✓

Counters

Hour meter	✓
Kilowatt meter	✓
Starter counter	✓

Caption

- ✓ Included □ Optional
- ✗ Not available ⓘ Consult

Readings available at control module level.

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Contact us and tell us what you need.

6.3. Control module



Standard ✓

Model

DSE 7320 MKII

Communications

RS232	✓
RS485	✓
USB communication port	✓
Modbus IP	▣ DSE 855/890/891
Modbus RS 485	✓
PC Software (Mimic)	✓
GSM/GRPS MODEM	▣ DSE 890
Remote display < 1km	▣ DSE 2520
Remote monitoring	▣ DSE 855/890
Input expansion	▣ DSE 2130 8 inputs
Output expansion	▣ DSE 2157 8 inputs
SNMP protocol	▣ DSE 892

Services

Configurable alarm history	250
External start	✓
Start-up inhibition	▣
Network Failure Start	✓
Activation of group counter	✓
Activation of grid and group counter	✓
Control of fuel transfer	✓
Motor temperature control	✓
Forced group operation	✓
Free programmable alarms	✓
Group start function in test mode	✓
Free programmable outputs	✓
Multilingual	✓

Special applications

GPS localisation	▣ DSE 890
Calendar scheduler	✓
DSE configuration suite via PC	✓
Front panel module configuration with PIN	✓
Alternative work	✓
Programmable PLC	✓
Power save mode	✓
Alternative configurations	✓
Dummy load control / load shedding	✓ 5 Stage dummy load

Caption

- ✓ Included ▣ Optional
 ✗ Not available ⓘ Consult

Readings available at control module level.

Confirm the availability of these readings for this generator and engine.

Ask us for further readings in generating sets equipped with electronically managed engines and DSE 7320MKII control module.



DO YOU WANT A SUPERIOR PERFORMANCE CONTROL MODULE?

Contact us and tell us what you need.

400/230V · 50Hz (1500 rpm)

CUMMINS KTA50-G23 | STAMFORD S7L1D-F

7. Detailed supply scope

Engine

CUMMINS KTA50-G23, EU STAGE 0, 1500 RPM, WATER-COOLED, ELECTRONICALLY CONTROLLED ENGINE.

- 16-cylinder inline Diesel engine, 4-stroke with Electronic fuel regulation by means of a fuel pump, original from the manufacturer.
- Equipped with direct injection and Turbocharged suction system. Original manufacturer's particle separator filter.
- Without industrial exhaust gas silencer and with exhaust compensators included.
* -10 DB(A) / 35DB(A) INDUSTRIAL EXHAUST SILENCER AVAILABLE AS AN OPTION.
- Refrigeration through cooling liquid, fully distributed in the closed circuit run by an engine driven pump, tropicalised radiator, original from the engine manufacturer.
- Crankshaft-driven pump lubrication system. The filter is a full-flow insert cartridge, front housing, original from the engine manufacturer.
- Air intake system for turbo-fed combustion with two-stage filter, original from the engine manufacturer.
- Electric motor starting system, battery (no maintenance) with disconnecter and load alternator driven by the 24V starter, original elements from the engine manufacturer.
- Protection from hot and moving parts.

Alternator

STAMFORD S7L1D-F ALTERNATOR OF 6 WIRES AND 4 POLES, BRUSHLESS AND WITH ELECTRONIC VOLTAGE REGULATION TYPE AVR (MX321+PMG).

- With IP23 protection class and H insulation class.
- Brushless 4-pole alternator. Robust mechanical structure with easy access to connections and components. H insulation class, coil pitch 2/3 and self-excited AVR. IP23 protection degree.
- Protection with premium epoxy resins. High voltage parts are impregnated under vacuum, which always means very good insulation.

Do you have any queries about the supply?

Get in touch with us.



400/230V · 50Hz (1500 rpm)

CUMMINS KTA50-G23 | STAMFORD S7L1D-F

Bench

- Bench made of high-strength electro-welded steel. Equipped with retention bath.
- Painted with electrostatic epoxy-polyester powder paint.
- Anti-vibration dampers from the engine block to the bedplate.
- Without a fuel tank.
* CHECK AVAILABLE INTEGRATED TANK OPTIONS DEPENDING ON THE MODEL.
- With measuring gauge and installation of fuel to the engine.
- Liquid drainage connection to the outside.
- **Bench tested in a salt spray chamber according to ASTM B-117-09 (500h resistance).**

Control panel

- **DeepSea Electronics automatic control module, DSE 7320 MKII which allows you to work in manual, automatic or signal mode.**
 - It offers multiple event logging and is fully configurable through DeepSea Electronics' free-access specific configuration software.
 - Three-phase network and group detection with measurement for configurations upon network failure.
- **DSE BC2405 24V, 5A DeepSea Electronics battery charger.**
 - Designed to be permanently connected to the battery and maintain 100% of the charge. The charger switches to float mode when charging is complete.
- **Protections:**
 - 4-pole magnetothermic protection against overloads and short circuits.
 - Protection fuses for the control set.

400/230V - 50Hz (1500 rpm)

CUMMINS KTA50-G23 | STAMFORD S7L1D-F

7. Detailed supply scope

Other equipment

- Mechanised fuel nozzle outside with key.
- Tropicalised Radiator for work at 50 °C*
- Prepared for maintenance intervals every 500 hours*.
- Rotary oil drain pump.
- Push button for emergency stop.
- Lifting points on the bench.

8. Featured options available



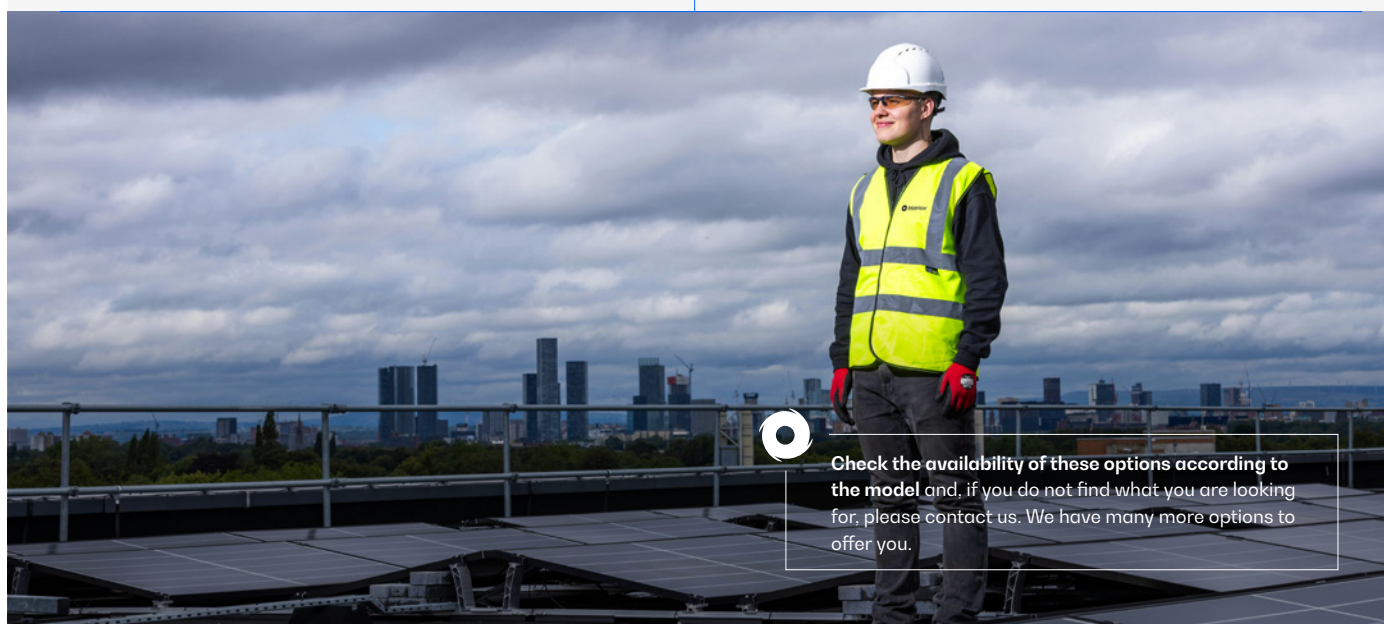
If your generator set needs to operate as a power source connected to the electrical grid...

You will need a **remote-operated motorized transfer switch**. This way, both power sources will alternate their operation without you having to do anything.


 SEE OTHER SYNCHRONISATION
 OPTIONS AVAILABLE


Do you need to scale up the power of your installation by synchronising several generating sets?

You can include island units and network sync **with the** Synchro Kit DSE 8610MKII (includes 4P motorisation + harting connectors + 10 meters of connecting cable between sets + ground contactor + PMG).



Check the availability of these options according to the model and, if you do not find what you are looking for, please contact us. We have many more options to offer you.

* Confirm the scope of supply depending on the model. Maintenance intervals may vary. Refer to the engine manufacturer's recommendations.

400/230V - 50Hz (1500 rpm)

CUMMINS KTA50-G23 | STAMFORD S7L1D-F

9. Even more options



Engine heating system

ENGINE - ALTERNATOR OPTIONS

- Engine heating system.
- Parker Filter.
- 6-way fuel valve kit.
- Alternator anti-condensation heaters.
- Superior generator impregnation systems.

MECHANICAL OPTIONS

- Sensor on retention bath.
- SilentBlocks for levelling.
- Damping - anti-vibration springs.
- Galvanized bench.

400/230V · 50Hz (1500 rpm)

CUMMINS KTA50-G23 | STAMFORD S7L1D-F



DSE 2157



DSE 334 network surveillance

COMMUNICATION OPTIONS

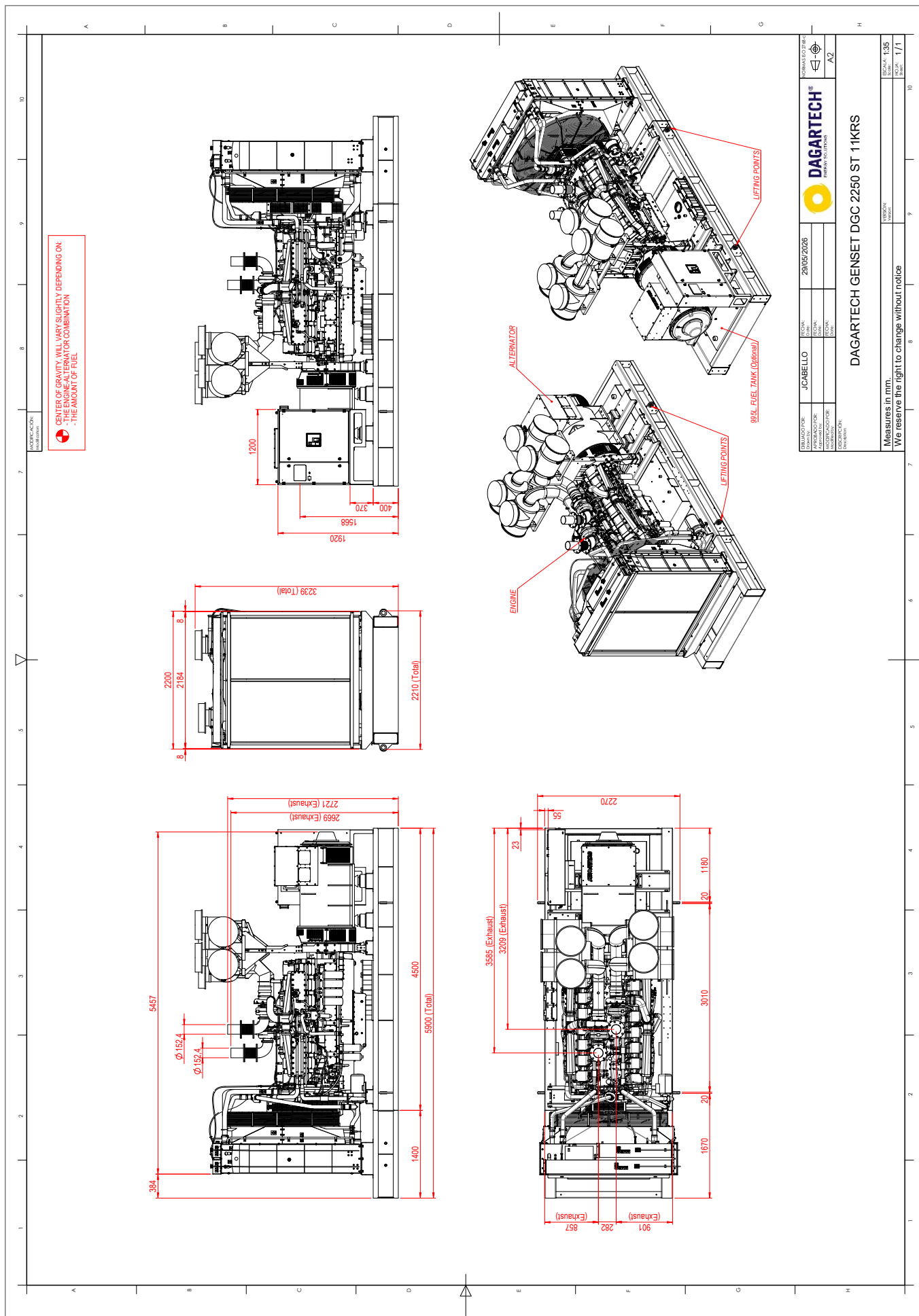
- DSE 2157 8 potential free output.
- DSE 2130 8 inputs.
- DSE 2548 8 LED diodes.
- DSE 855.
- DSE 890 webnet.
- DSE 7420 module.
- DSE 334 network surveillance.



Socomec motorised switchboard

POWER OPTIONS

- Differential protection.
- As an option, you can include a switch cabinet attached to the generating set.
- Socomec motorised switches.





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CUSTOM ENERGY SOLUTIONS

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