EU STAGE V EMISSIONS

DGDR 40 ST

Rental Plus Range

POWER (PRP / ESP):
39 / 43 kVA (31 / 34 kW)

FREQUENCY
50Hz

VOLTAGE
400/230V

WEIGHT WITH LIQUIDS AND WITHOUT FUEL:
1270kg

DIMENSIONS (BK-EU5):
L: 2337 mm
W: 1042 mm
H: 1643 mm

Indicative technical plan and indicative images. Dagartech reserves the right to modify the data in this technical sheet without prior notice.

Diesel | EU Stage V | DPF | Water-cooled | CE Certified

1. General technical data

1.1. Main technical data

Engine	**DEUTZ TD2.9L4**
Alternator	**STAMFORD S1L2-K**
Fuel	Diesel
Type of execution	G2
Control panel	DSE 7320 MKII
Tank (l)	150
Sound level-Lp(A) (dB(A)@1m)[1]	72
Sound level-Lp(A) (dB(A)@7m)[1]	64
Sound power-LW(A) (dB(A))	91

[1]The 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	**39** / 31	**43** / 34	56,3	62,1

[1]PRP: 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).
- **Regulation (EU) 2016/1628 on the Emissions of Pollutant Gases and Particles.**

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2. Engine specifications

400/230V · 50Hz (1500 rpm) — **DEUTZ TD2.9L4 | STAMFORD S1L2-K**

2.1. General technical data of the engine

Make and model	**DEUTZ TD2.9L4**
Emissions	EU Stage V
r.p.m.	1500
Maximum ESP power (kWm)	39
Power PRP (kWm)	35,1
Fuel	Diesel
No. of cylinders	4
Cylinder capacity (c.c.)	2900
Compression ratio	1 : 17,8
Cooling system	Water-cooled
Type of regulation	Electronic
Type of engine/injection/suction	Diesel / Common rail / Turbocharged

2.2. Fuel

Type of fuel	Diesel
Tank capacity	150

2.3. Consumption and autonomy

	Consumption (l/h)		**Autonomy (h)**	
	PRP	**ESP**	**PRP**	**ESP**
50%	5	-	30	-
75%	7,3	-	20,5	-
100%	9,5	N/A	15,8	N/A

2.4. Cooling system

Fan flow (m^3/s)	1,1
Radiator back pressure (mBar)	1,5
Fan power consumption (kW)	1
Total refrigerant capacity (l)	3,5

2.5. Lubrication system

Oil capacity (l)	9
Oil consumption (N/A)	N/A

2.6. Intake system

Combustion air intake flow (m^3/h)	248

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400/230V · 50Hz (1500 rpm)	DEUTZ TD2.9L4 | STAMFORD S1L2-K

2.7. Starter system

No. of batteries	1
Battery characteristics	12V 60Ah
Start-up voltage (V)	12V

2.8. Exhaust system

Exhaust gas flow (m^3/h)	559 [PRP]	559 [ESP]
Exhaust gas temperature (°C)	460 [PRP]	460 [ESP]
Exhaust outside diameter (mm)	3" (Ø 76,2)	
Exhaust attenuation level (dB(A))	0	
Max. exhaust back pressure (mBar)	30	

3. Alternator specifications

3.1. General technical data of the alternator

Make and model	**STAMFORD S1L2-K**
No. of poles	4
Insulation class	H
No. of threads	12
Mechanical protection index	IP23
Voltage Regulator (AVR)	VITA01
Voltage regulation	±1%
ESP power 27°C (kVA)	44
Power PRP 40°C (kVA)	40
No. of phases	3
Power factor (cos φ)	0,8

WITH AUXILIARY WINDING
IN ITS STANDARD SUPPLY RANGE.

Performance η (%)			
50%	**75%**	**100%**	**110%**
90,7%	89,9%	87,8%	86,6%

ⓘ Standard regulations that the alternator meets:

AS 1359 | IEC 34-1 1 | BS EN 60034-1 | VDE 0530 | BS 5000 | CAN/CSA-C22.2-100 | NEMA MG1-32

Low wave distortion: THD (100% load) = 2% | THF < 2%
Complies with: EN61000-6-3, EN61000-6-2 regarding radio interference.

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400/230V · 50Hz (1500 rpm) DEUTZ TD2.9L4 | STAMFORD S1L2-K

4. Bench Specifications

- Unit mounted on **electro-welded high-resistance steel bench**, painted with epoxy-polyester powder paint. Includes a **retention bath**.
- Connection of the assembly to the bench by means of **anti-vibration dampers**.
- **Fuel tank located on the bench itself**. The engine is equipped with a measuring gauge and fuel system.
- **Tested in a salt spray chamber according to ASTM B-117-09, resistance 500h**.

5. Soundproof Canopy Specifications

- **Electro-welded canopy made of high resistance galvanized steel** painted with electrostatic epoxy-polyester powder
- Interior soundproofing by means of a **lining with soundproofing material**.
- **Efficient attenuation silencer** for the evacuation of gases to the outside with protective cover.
- **Tested in a salt spray chamber according to ASTM B-117-09, resistance 720H. IP44 mechanical protection degree**.

THE CANOPIES OF THE RENTAL PLUS RANGE ARE MADE OF HIGH-RESISTANCE GALVANIZED STEEL AND ARE ELECTRO-WELDED AND PAINTED WITH ELECTROSTATIC EPOXY-POLYESTER POWDER PAINT.

In addition, they are equipped with a **rigid panel** made of glass wool with an outer textile covering. We also incorporated an efficient **silencer attenuation device for the evacuation of gases to the outside**, featuring a rain cap.

*Our canopies are tested in a salt spray chamber according to standard **ASTM B-117-09** (resistance 720H. **IP44 mechanical protection** grade).*

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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**.

Protections:

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

6.2. Circuit breaker

Model	Schneider Acti 9 63A 4P

6.3. Control module

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

Model	DSE 7320 MKII

DSE 7320 MKII DEEP SEA control card with mains grid monitor. The genset will automatically start up when detecting a fault in the electric power network and it will turn off automatically as well, when the electrical supply is re-established. It can also work in manual mode and by signal. It allows you to monitor a wide range of generator parameters and display information alerts, status and alarms.

The module includes communication ports USB , RS232, RS485,and also DSENet® for system expansion. Possibility of Ethernet networking (plug).

The entire module is easily configurable via PC using the DSE specific software configuration.

It has 132x64p illuminated LCD display with 4 lines of text, 5-key navigation through menus, 9 configurable outputs and 8 configurable inputs, programmable clocks and alarms, reading and displaying parameter values, including RMS values.

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

Other alternative configurations are available upon request to extend the capabilities of the operation modes.

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)

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400/230V · 50Hz (1500 rpm) | DEUTZ TD2.9L4 | STAMFORD S1L2-K

6.3. Control module

	Standard
Model	DSE 7320 MKII
Operating modes	
STOP mode	✓
MANUAL mode	✓
TEST mode	✓
AUTO mode	✓
Module configuration options	
PC	✓
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 ⓘ Consult

Readings available at control module level.

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

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400/230V · 50Hz (1500 rpm) | DEUTZ TD2.9L4 | STAMFORD S1L2-K

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.

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

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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.

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7. Detailed supply scope

Engine

DEUTZ TD2.9L4, EU STAGE V, 1500 RPM, WATER-COOLED, WITH ELECTRONIC REGULATION ENGINE.

— 4-cylinder inline Diesel engine, 4-stroke with Electronic fuel regulation by means of a fuel pump, original from the manufacturer.

ⓘ Equipped with a Diesel Particulate Filter (DPF).

— **Sensors and alarms:**

- Oil pressure alarm.
- Temperature alarm.
- Coolant level alarm.
- Oil pressure reading.
- Coolant temperature reading.

— Common rail injection and Turbocharged suction system. Original manufacturer's particle separator filter.

— 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 disconnector and load alternator driven by the 12V starter, original elements from the engine manufacturer.

— Protection from hot and moving parts.

Alternator

STAMFORD S1L2-K ALTERNATOR OF 12 WIRES AND 4 POLES, BRUSHLESS AND WITH ELECTRONIC VOLTAGE REGULATION TYPE AVR (VITA01).

— 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.

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400/230V · 50Hz (1500 rpm) DEUTZ TD2.9L4 | STAMFORD S1L2-K

Bench

- Bench made of high-strength electro-welded steel. Includes a retention bath.
- Painted with electrostatic epoxy-polyester powder paint.
- Anti-vibration dampers from the engine block to the bedplate.
- Fuel tank included on the bench itself. Equipped with cleaning record to facilitate maintenance work.
- 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).**

Soundproofed canopy

- Electro-welded canopy of high resistance galvanized steel.
- Painted with electrostatic epoxy-polyester powder paint.
- Interior soundproofing by means of a rigid panel made of glass wool with an exterior textile covering.
- With IP44 mechanical protection level.
- **Canopy tested in salt spray chamber according to ASTM B-117-09 (resistance 720h).**

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

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7. Detailed supply scope

Other equipment

- Mechanised fuel nozzle outside with key.
- Tropicalised Radiator for work at 50 °C*.
- High-performance original manufacturer fuel particle separator filter.
- Prepared for maintenance intervals every 500 hours*.
- Push button for emergency stop.
- Differential Protection.
- Reinforced pole centrally-mounted.
- Reinforced terminals.
- Stainless steel rain shield.
- Thermal sleeves.
- Spark arrestor.
- Glow plugs.
- Document holder tray.

8 KW LOAD BANK INCLUDED IN DGDR 40 ST
15 KW LOAD BANK INCLUDED IN DGDR 60 ST
OPTIONAL IN DGDR 30 ST (8KW).

Load Bank with stainless steel fins and galvanized steel enclosure

In generator sets equipped with EU Stage V engines, operating at low loads significantly affects engine performance and lifespan. The **load bank** ensures that the generator set reaches the necessary load levels and the **required temperature conditions** to carry out the regeneration processes these engines demand.

Oil drain pump

Facilitates the extraction of engine oil for an oil change in a matter of minutes.

Auxiliary winding in the alternator

It promotes a **stable and adequate electrical current** for the generator set's operation.

Power sockets

Different configurations depending on the model.

	30-40 kVA CB 30	60 kVA CB 40
Schuko	1	2
16A 2P+T (230V)	1	1
16A 3P+N+T	-	-
32A 3P+N+T	1	1
63A 3P+N+T	1	1
125A 3P+N+T	-	-

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

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8. Featured options

KITS

- **Automation kit for mains failure operation** (includes engine heater, battery charger, AUTO selector with key, and programming).
- **Automation kit for start and stop by signal** (includes battery charger, AUTO selector with key, and programming).
- **External refueling kit** (includes external fuel connectors and 6-way fuel valve kit).
- **50 / 60 Hz kit** (includes 50 / 60 Hz selector, AVR in electrical panel, potentiometer, and programming).
- **AVR kit** (includes AVR in electrical panel and potentiometer).
- **Synchro Kit 1** (includes DSE 8610 MKII controller, motorized circuit breaker, Harting connector, 10 meters of cable, earth contactor, PMG, and testing) - available from 60kVA power.
- **Synchro Kit 2** (includes ComAp IntelliGen 4 200 controller, motorized switch, Harting connector, 10 meters of cable, earth contactor, PMG, and testing) - available from 60kVA power.
- **Extra Protection Kit for power sockets** (includes thermal-magnetic protection per socket - Curve C and differential protection per socket - Class A).
- **EU Kit** (includes thermal-magnetic protection per base - Curve B and differential protection per base - Class B).

ALTERNATOR OPTIONS

- Alternator impregnation system (spray).

ELECTRICAL AND COMMUNICATION OPTIONS

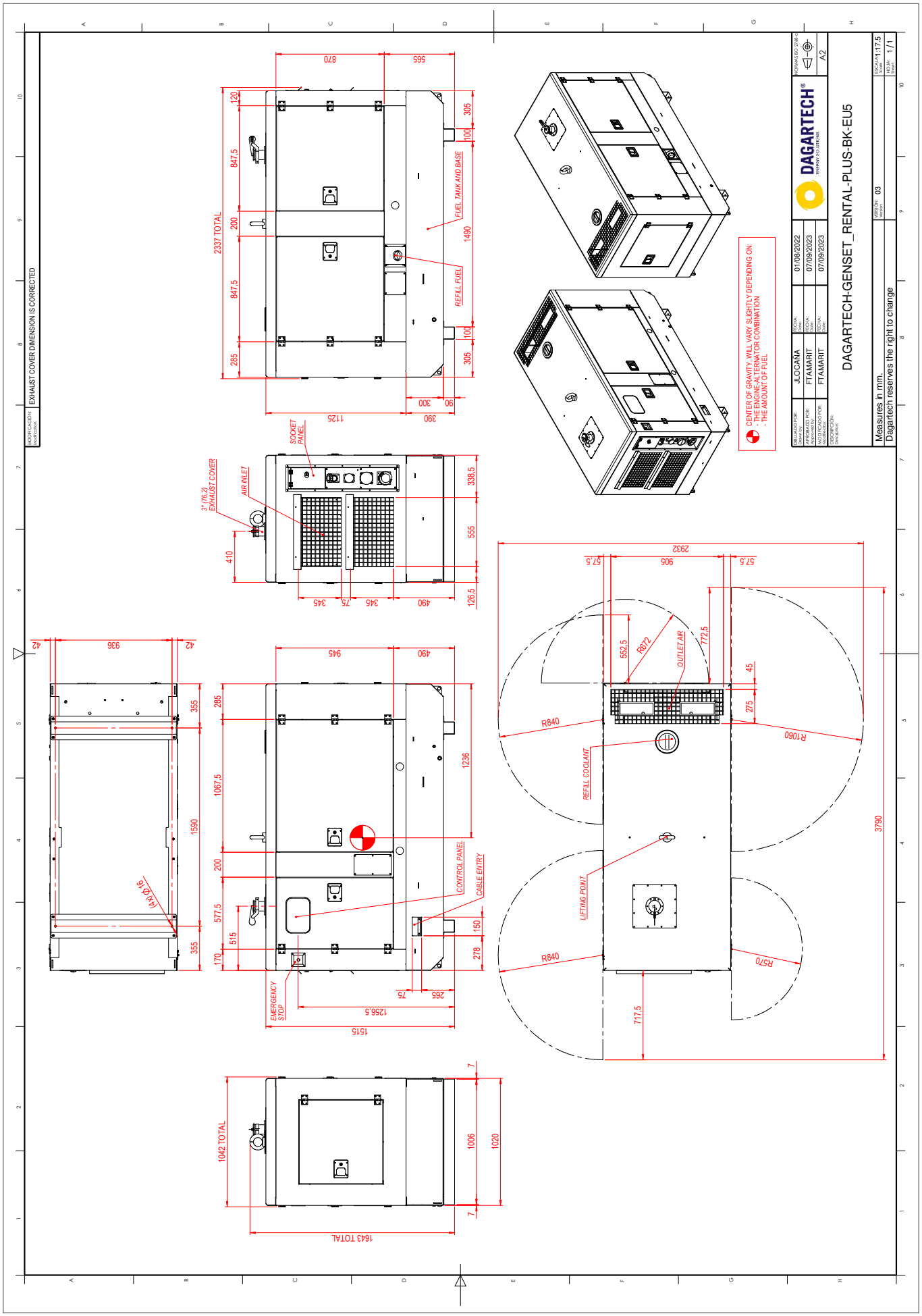
- DSE 890 MKII DSEWebNet® Module / IoT Gateway - 4G (GSM/Ethernet).
- Power Locks (Consult from 60 kVA onwards).
- Ground spike.
- Load bank with stainless steel fins and galvanized steel enclosure (standard)*.
  - 8 kW in DGDR 30 ST and DGDR 40 ST models.
- Load bank with stainless steel fins and stainless steel enclosure (for intensive applications).
  - 8 kW in DGDR 30 ST and DGDR 40 ST models.
  - 15 kW in DGDR 60 ST model.

Capot completo de acero inoxidable (304)

MECHANICAL OPTIONS

- High capacity fuel tank.
- Sensor on retention bund warning when spillage.
- Hour meter
- Full stainless steel hood (304).
- C5-M (Marine coating) paint on the canopy and baseframe.
- Galvanized base frame.
- Non-standard RAL color.

* Check the availability of these options based on the model.
Included in DGDR 60 ST model.



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