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

DGYS 45 ST EU3A

Industrial Plus Range

POWER (PRP / ESP):
40 / 44 kVA (32 / 35 kW)

FREQUENCY
50Hz

VOLTAGE
400/230V

WEIGHT WITH LIQUIDS AND WITHOUT FUEL:
1080kg

DIMENSIONS (BK):
L: 2302 mm
W: 1042 mm
H: 1360 mm

Generating set exclusively for stationary use.
It must not be used as a non-road mobile machine, as defined in Regulation (EU) 2016/1628 (Chapter I, Article 3, Point 1).

Diesel | EU Stage IIIA | Water-cooled | CE Certified

1. General technical data

1.1. Main technical data

Engine	YANMAR 4TNV98T-ZGECS
Alternator	**STAMFORD S1L2-K**
Fuel	Diesel
Type of execution	G2
Control panel	DSE 6120 MKIII
Tank (l)	143
Sound level-Lp(A) (dB(A)@1m)[1]	75
Sound level-Lp(A) (dB(A)@7m)[1]	64
Sound power-LW(A) (dB(A))	90

[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	**40** / 32	**44** / 35	57,7	63,5

[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).

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2. Engine specifications

400/230V · 50Hz (1500 rpm)	YANMAR 4TNV98T-ZGECS | STAMFORD S1L2-K

2.1. General technical data of the engine

Make and model	**YANMAR 4TNV98T-ZGECS**
Emissions	EU Stage IIIA
r.p.m.	1500
	Generating set exclusively for stationary use. It must not be used as a non-road mobile machine, as defined in Regulation (EU) 2016/1628 (Chapter I, Article 3, Point 1).
Maximum ESP power (kWm)	41,9
Power PRP (kWm)	37,9
Fuel	Diesel
No. of cylinders	4
Cylinder capacity (c.c.)	3319
Compression ratio	18,1
Cooling system	Water-cooled
Type of regulation	Electronic
Type of engine/injection/suction	Diesel / direct / Turbocharged

2.2. Fuel

Type of fuel	Diesel
Tank capacity	143

2.3. Consumption and autonomy

	Consumption (l/h)		Autonomy (h)	
	PRP	**ESP**	**PRP**	**ESP**
50%	4,9	-	29,2	-
75%	6,9	-	20,6	-
100%	9,2	10,1	15,6	14,1

2.4. Cooling system

Fan flow (N/A)	N/A
Radiator back pressure (N/A)	N/A
Fan power consumption (kW)	N/A
Total refrigerant capacity (l)	8

2.5. Lubrication system

Oil capacity (l)	11,2
Oil consumption (N/A)	N/A

2.6. Intake system

Combustion air intake flow (m^3/min)	3,2

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400/230V · 50Hz (1500 rpm)	YANMAR 4TNV98T-ZGECS | 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/min)	N/A [PRP]	0 [ESP]
Exhaust gas temperature (°C)	620 [PRP]	N/A [ESP]
Exhaust outside diameter (mm)	2,5" (Ø 63,5)	
Exhaust attenuation level (dB(A))	-30	
Max. exhaust back pressure (N/A)	9,8	

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
ON UNITS BELOW 100 KVA

WITH PMG
ON UNITS OF 100 KVA AND ABOVE

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

ⓘ Standard regulations that the alternator meets:

AS 1359 | IEC 34-11 | 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) YANMAR 4TNV98T-ZGECS | 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 INDUSTRIAL 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	Chint 63A 4P

6.3. Control module

1. Transfer to the generator (manual mode)
2. Start engine (manual mode)
3. Silence alarm
4. Automatic mode
5. Test mode
6. Manual mode
7. Genset stop
8. MAIN NETWORK transfer (manual mode)
9. Navigation keyboard
10. Main status and instrument display

Model	DSE 6120 MKIII

The DSE 6120 MKIII is an Automatic Mains Failure (AMF) control module designed for use in a wide range of applications with diesel or gas generators. Upon detecting a power supply interruption, it automatically starts the generator and shuts it down once the mains power is restored. It also allows operation in manual and test modes.

This module allows monitoring of multiple engine parameters and displays alerts, statuses, and alarms on a backlit LCD screen. It is compatible with both electronic (CAN) and non-electronic engines, offering configurable inputs and outputs to suit various needs. Additionally, it includes USB communication and allows expansion via DSENet®.

Its configuration is straightforward and can be done using the DSE Configuration Suite software or directly from its front panel. It also features advanced functionalities such as event and performance monitoring, remote communications, and PLC programming capabilities.

The module dimensions are 216 mm x 158 mm x 43 mm, with a panel cutout of 184 mm x 137 mm and a maximum panel thickness of 8 mm. It is an ideal solution for applications that require reliable control and monitoring of the generator.

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) | YANMAR 4TNV98T-ZGECS | STAMFORD S1L2-K

6.3. Control module

Model	Standard ✓ DSE 6120 MKIII	Option ⊙ 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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6.3. Control module

Standard ✓

Option ⊙

Model	DSE 6120 MKIII	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	✓	✓
Low load operation warning	⊙	⊙
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 ✓

Option ◉

Model	DSE 6120 MKIII	DSE 7320 MKII
Communications		
RS232	✗	✓
RS485	✗	✓
USB communication port	✓	✓
Modbus IP	◉ DSE 855/890/891	◉ DSE 855/890/891
Modbus RS 485	◉ DSE 855/890/891	✓
PC Software (Mimic)	✓	✓
GSM/GRPS MODEM	◉ DSE 890	◉ DSE 890
Remote display < 1km	✗	◉ DSE 2520
Remote monitoring	◉ DSE 855/890	◉ DSE 855/890
Input expansion	◉ DSE 2130 8 inputs	◉ DSE 2130 8 inputs
Input expansion (Thermocouple)	◉ DSE 2133	◉ DSE 2133
Output expansion	◉ DSE 2152/2157 8 inputs	◉ DSE 2152/2157 8 inputs
Status LED expansion	◉ DSE 2548	◉ DSE 2548
SNMP protocol	◉ DSE 892	◉ DSE 892
Services		
Configurable alarm history	250	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	◉ 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

YANMAR 4TNV98T-ZGECS, EU STAGE IIIA, 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.
- **Sensors and alarms:**
  - Oil pressure alarm.
  - Temperature alarm.
  - Coolant level alarm.
  - Oil pressure reading.
  - Coolant temperature reading.
- direct 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) | YANMAR 4TNV98T-ZGECS | 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 6120 MKIII 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*.
- Prepared for maintenance intervals every 500 hours*.
- High-performance original fuel particle separator filter from the manufacturer.
- Oil drain pump (included in models equipped with Volvo engines).
- Push button for emergency stop.
- Differential Protection.
- Reinforced pole centrally-mounted.
- Reinforced terminals.
- Hour counter.
- Stainless steel rain shield.
- Thermal sleeves.
- Document holder tray.

Power sockets

Different configurations depending on the model.

	35-45 kVA CB 20	65-70 kVA CB 30	110-220 kVA CB 40	275-550 kVA CB 50
Schuko	1	1	2	2
16A 2P+T (230V)	-	1	1	1
16A 3P+N+T	-	-	-	-
32A 3P+N+T	1	1	2	1
63A 3P+N+T	1	1	1	1
125A 3P+N+T	-	-	-	1

* 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 - network failure** (includes engine heater, battery charger, key-operated auto selector and programming).
- **Automation kit for mains failure operation** (includes engine heater, battery charger, AUTO selector with key, and programming).
- **SuperSilent Kit** (includes -50dB(A) exhaust silencer and heavy mass on the alternator).
- **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).
- **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).

ENGINE OPTIONS

- Electronic engine governor (on models with standard mechanical regulation).
- Manual oil drain pump (for models without this feature in their standard supply scope).
- 6-Way Valve Kit with quick connectors.

ALTERNATOR OPTIONS

- Alternator impregnation system (spray).
- Alternator impregnation system 4 (special varnish).

ELECTRICAL AND COMMUNICATION OPTIONS

- Power Locks.
- Ground spike.
- ComAp IL4 AMF25 extra price.

MECHANICAL OPTIONS

- Sensor on retention bund warning when spillage.
- C5 (Marine coating) paint on the canopy and baseframe.
- Non-standard RAL color.
- High-capacity fuel tanks.

* Check the availability of these options based on the model.

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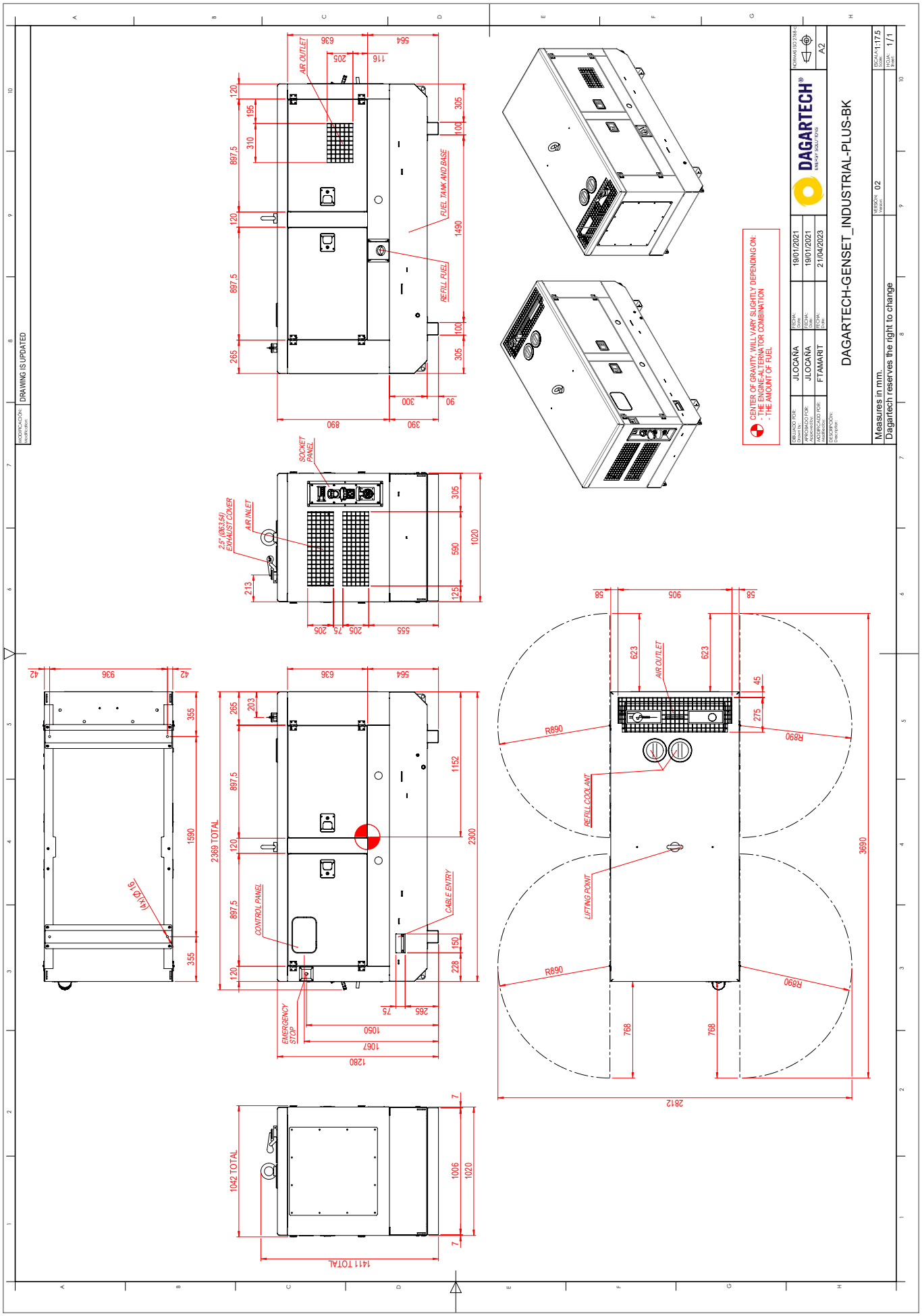

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