IGSA POWER

DATA SHEET DIESEL GENERATOR SET

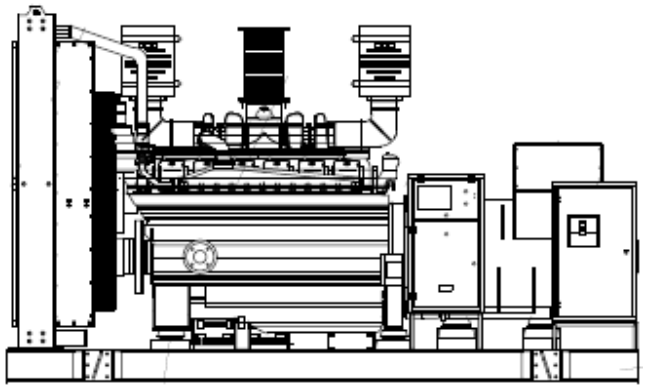
GSBD31500W-UL

c UL us LISTED

▶ Model

GSBD31500W-UL

ENGINE BRAND	BAUDOUIN
ENGINE MODEL	16M33G2D2/6
ALTERNATOR BRAND	WEG
GENERATOR CONTROLLER	DSE 7310



▶ GENSET RATING

ENGINE	ALTERNATOR	VOLTAGE	PH	Hz	STANDBY POWER		POWER FACTOR	CURRENT
		V			kW	KVA		A
16M33G2D2/6	AG10400MI8	600/346	3	60	1500	1875	0.8	1806

▶ Certifications

CERTIFICACIÓN DEL SISTEMA DE GESTIÓN DNV ISO 9001 · ISO 14001 ISO 45001

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Standby Power. Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

▶ ENGINE FEATURES

- BRAND — BAUDOUIN
- MODEL — 16M33G2D2/6
- EXHAUST EMISSIONS — TIER 3
- RPM — 1800
- STANDBY RATING kWm — 1680
- STANDBY RATING bhp — 2253
- PRIME RATING kWm — 1530
- PRIME RATING bhp — 2052
- NUMBER OF CYLINDERS — 16
- ASPIRATION — TURBOCHARGED AND AFTERCOOLED
- DISPLACEMENT in3 — 3191
- ENGINE AIR FLOW CFM (m3/min) — 5237
- GOVERNOR TYPE — ELECTRONIC
- CONTROL VOLTAGE v — 24
- BORE/STROKE, in — 5.9X7.2(150X185)
- COOLANT CAPACITY WITHOUT RADIATOR gal — 34.34
- OIL CAPACITY, TOTAL gal — 46.23

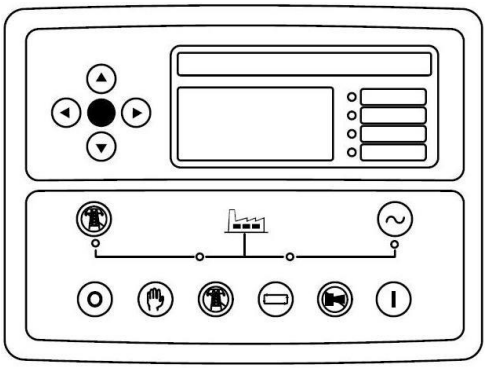
▶ FUEL CONSUMPTION

STANDBY POWER		
LOAD	GAL/hr	L/hr
100%	112.85	427.2
75%	80.81	305.9
50%	54.81	207.5
25%	30.67	116.1

▶ ALTERNATOR FEATURES

- BRAND — WEG
- MODEL — AG10400MI80FI
- FREQUENCY — 60 Hz
- PHASES — 3
- WINDING LEADS — 6
- INSULATION SYSTEM — H CLASS
- CONTROL SYSTEM — AUXILIARY COIL
- PROTECTION — IP23
- POWER FACTOR — 0.8
- COOLING AIR CFM —
- VOLTAGE REGULATION (%) — ≤ 3%

▶ GENERATOR CONTROLLER



» MODEL

DEEP SEA 7310

The DSE7310 MKII is an Auto Start Control Module and the DSE7320MKII is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs, remote PC and via SMS text alerts (with external modem). The DSE7320 MKII will also monitor the mains (utility) supply. The modules include USB, RS232 and RS485 ports as well as dedicated DSENet® terminals for system expansion.

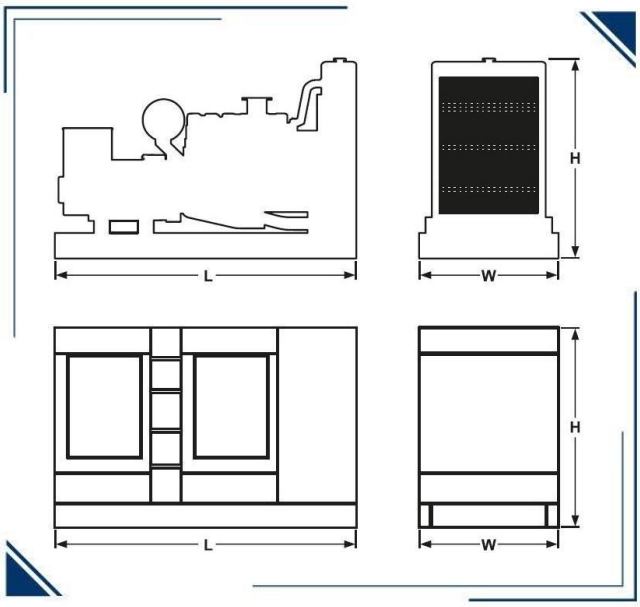
KEY FEATURES

- 4-Line back-lit LCD text display
- Multiple Display Languages
- Five key menu navigation
- LCD alarm indication
- DSENet expansion compatibility
- Internal PLC editor
- Protections disable feature
- Fully configurable via PC using USB, RS232 & RS485 communication
- Front panel configuration with PIN protection
- Power save mode
- 3 phase generator sensing and protection
- 3 phase mains (utility) sensing and protection (DSE7320 MKII only)
- Automatic load transfer control (DSE7320 MKII only)
- Generator current and power monitoring (kW, kvar, kVA, pf)
- Mains current and power monitoring (kW, kvar, kVA, pf) (DSE7320 MKII only)
- kW and kvar overload and reverse power alarms
- Over current protection
- Unbalanced load protection
- Independent earth fault protection
- Breaker control via fascia buttons
- Fuel and start outputs configurable when using CAN
- 6 configurable DC outputs
- 2 configurable volt-free relay outputs
- 6 configurable analogue/digital inputs
- Support for 0 V to 10 V & 4 mA to 20 mA sensors
- 8 configurable digital inputs
- Configurable 5 stage dummy load and load shedding outputs
- CAN, MPU and alternator frequency speed sensing in one variant
- Real time clock
- Manual and automatic fuel pump control
- Engine pre-heat and post-heat functions
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel usage monitor and low fuel level alarms
- Simultaneous use of RS232 and RS485 communication ports
- True dual mutual standby using RS232 or RS485 for accurate engine hours balancing.
- MODBUS RTU support with configurable MODBUS pages.
- Advanced SMS messaging (additional external modem required)
- Start & stop capability via SMS messaging
- 3 configurable maintenance alarms
- Compatible with a wide range of CAN engines, including tier 4 engine support
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- Modules can be integrated into building management systems (BMS) using MODBUS RTU

KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE7320 MKII only) for convenience.
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored & displayed simultaneously for full visibility
- The module can be configured to suit a wide range of applications for user flexibility
- PLC editor allows user configurable functions to meet user specific application requirements.

▶ DIMENSIONS AND WEIGHT



OPEN GENSET					
DIMENSION	Length (L)	Width (W)	Height (H)	Weight	Noise Level
			IN	Lbs	dB
	222	91	112		
ENCLOSED GENSET LEVEL 2					
DIMENSION	Length (L)	Width (W)	Height (H)	Weight	Noise Level
			IN	Lbs	dB
	315	100	142		

▶ ACOUSTIC ENCLOSURE

Acoustic enclosure designed and manufactured with 14 gauge carbon steel sheet, polyurethane acoustic coating, access and air expulsion to avoid gas accumulation, drainage system to avoid liquid accumulation. Electrostatic painting for extended life.
We have options for enclosures in aluminum or stainless steel

▶ STANDARD FEATURES & ACCESSORIES

- DSE 9470 Battery Charger
- Battery and Battery Rack
- ABB Main Line Circuit Breaker
- OPT-05PE AVR
- Hotstart Pre heater RMP-CSM10602-000
- Residential Grade Silencer Open Unit
- Critical Grade Silencer Inside Enclosure
- Emergency Stop Button
- Flex Fuel Lines
- Protection Covers for Rotating Parts
- Exhaust Insulation Cover
- Anti Vibration Pads between Engine/Alternator & Base Frame
- Operation and Maintenance manuals
- 24 Months /1000 hours Limited Standby Warranty

▶ OPTIONAL ACCESSORIES

- Paralleling Adder (DSE8610 & Motorized Breaker)
- 120V GFCI Receptacle
- 240V Receptacle
- Alternator Strip Heater
- Battery Blanket Heater
- Battery Disconnect Switch
- Battery Pad Heater
- Battery Restraint
- Control Panel Heater
- DSE2157 Output Module (8 dry contacts)
- DSE2520 Remote Display Module
- DSE2548 Remote Annunciator (16 light)
- DSE2548 Remote Annunciator (24 light)
- DSE2548 Remote Annunciator (8 light)
- DSE890 3G GATEWAY
- GSM/GPS ANTENNA 3M RG-174, GSM-SMA(M), GPS-SMA(F)
- DSE9641 10A Battery Charger
- DSE9470 10A Battery Charger
- Enclosure AC light and On/Off Switch
- Enclosure DC light and On/Off Switch
- Enclosure space Heater (1500w/120v)
- Load Center / Distribution Board (100 A, 12 Breaker)
- Load Center / Distribution Board (200 A, 8 Breaker)
- AVR UPGRADE
- Oil Pan Heater
- Relay - 10A Common Alarm
- Relay - 10A Run Relay
- Remote E-Stop- Breaker Glass Type / Nema 3R
- Remote E-Stop- Breaker Glass Type / Nema 4X
- Remote E-Stop- Flush Mount
- Remote E-Stop- Surface Mount
- Remote E-Stop- Visual/ Plastic Hinged Cover
- Spring Isolator- Non Seismic (ACE 121 Series) SKIRT NOT INCLUDED
- Spring Isolator- Seismic/Restraint (ACE 821 Series) SKIRT NOT INCLUDED
- Voltage Adjust Rheostat
- Automatic Transfer Switch

▶ OPTIONAL UL142 SUB BASE TANK

	24 hr	48 hr	72 hr
Fuel Capacity (gal)	3100	6200	
Dimensions (L/W/H) in			
Weight lb			

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Laredo, Texas 78041
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Ratings

RPM	Gross Engine Output				Net Engine Output			
	PRP		ESP		PRP		ESP	
	kWm	BHP	kWm	BHP	kWm	BHP	kWm	BHP
1800	1530 *	2052 *	1680	2253	1454 *	1950 *	1604	2152

1 kWm = 1,34102 BHP
When the engine is used with a cooling system using an electrically driven fan, net engine output data may change and quoted figures should be used for reference only

Basic data

Engine model 16M33G2D2/6
N° of Cylinders / Valves ..... 16 / 64
Cylinders arrangement ..... At Vee
Bore x Stroke (mm) ..... 150 x 185
Displacement (L) 52.3
Thermodynamic Cycle ..... Diesel 4 stroke
Firing Order A1-A7-B4-B6-A4-B8-A2-A8-B3-B5-A3-A5-B2-A6-B1-B7
Mean Piston Speed (m/s) 11.1
BMEP @ ESP (Bar) 21.41
Cooling System ..... Liquid (water + 50% antifreeze)
Injection System ..... Direct
Fuel System ..... High Pressure Common Rail
Aspiration ..... Turbocharged and Aftercooled
Compression ratio ..... 15 : 1
Flywheel housing ..... SAE 0
Flywheel ..... 18"
Rotation Viewed from Flywheel… ..... Counterclockwise
Allowed static bending moment of the flywheel housing…. ..... /
N° of teeth on flywheel ring gear 194
Inertia of flywheel (kg•m²) 7.2
Inertia of crankshaft (kg•m²) 10.1
Emission standard ..... EPA Tier2
Overall Dimensions with radiator (Length x Width x Height) (mm) ..... 3967x 2237 x 2485
Engine dry weight without radiator and without radiator pipes (kg) 5200
Engine dry weight with radiator and radiator pipes (kg) 6470
Engine wet weight with radiator (includes oil, coolant) (kg) 7171

* The indicated PRP Power is for reference only. This engine is designed for emergency standby power (ESP) applications only.

Air intake system

Air intake temperature rise (°C) ..... ≤ 5
Air intake restriction clean filter (mBar) ..... ≤ 30
Air intake restriction dirty filter (mBar) ..... ≤ 62
Recommended air flow @ PRP (m³/min) 141.2
Recommended air flow @ ESP (m³/min) 148.3
Min. diameter of intake pipe (mm) 140

Aftercooling system

Aftercooler system type ..... Air to Water
Max. intake temperature @ 25°C ambient temperature (°C) 55
Max. difference between intake temperature and ambient temperature (°C) 30
Max. intake pressure drop of aftercooler (mBar) 80

Lubrication system

Oil capacity Low / High (L) ..... 114 / 171
Oil pressure in normal condition idle speed (Bar) ..... ≥ 2
Oil pressure in normal condition at 1800 Rpm @ PRP (Bar) ..... 4 - 6.5
Lowest oil pressure alarm (shutdown) (Bar) 2
High Oil Pressure Warning …. 10
Max. oil temperature (°C) 105
Oil flow at 1800 Rpm (L/min) ..... ≥ 640
Oil fuel consumption ratio based on engine fuel consumption data ..... ≤ 0.3 %
Total system capacity (including filters) (L) 175

Heat balance test data (with ambient temperature 32 °C)

Total heat dissipation @ ESP (kJ/s) 2610.8
- Heat Rejection to Jacket Water @ ESP (kJ/s) 621.2
- Heat Rejection to Low temperature circuit @ ESP (kJ/s) 470.5
- Radiated Heat to Ambient @ ESP (kJ/s) 27.4
- Heat Rejected to Exhaust @ ESP (kJ/s) 1491.7

Exhaust system

Max. exhaust back pressure (mBar) 75
Max. exhaust temperature before turbocharger (°C) 750
Max. exhaust temperature after turbocharger (°C) 550
Exhaust flow @ PRP (m³/min) 427.3
Exhaust flow @ ESP (m³/min) 470
Min. diameter of exhaust pipe (mm) 200
Max. bending moment of exhaust gas exit flange (Nm) 10

Cooling system with standard radiator

System designed for ambient temperature up to (°C) [1] 50
Radiator type ..... Mechanical
Fan type ..... Belt driven pusher
Min. inside diameter of coolant outlet pipe (mm) 100
Coolant capacity of radiator and pipes (L) 412
Coolant alarm (shutdown) temperature (°C) 108
Thermostat opening temperature / full open temperature (°C) ..... 80 / 92
Max. additional restriction for external cooling circuit (Bar) 0.38
Coolant capacity of the engine (L) 130
Cooling fan airflow (m³/min)* 2340
Fan absorbed power (kW) 74
Additional restriction (for reference) - Duct allowance (Pa) 150

* Air flow figure assumes the presence of the standard radiator provided, taking into consideration the backpressure caused

Fuel system

Governor ..... ECU
Governor steady state speed stability at constant load (ISO 8528-5 Class G3) [2] ..... ≤ +/- 0.5 %
Max. restriction at fuel inlet (Bar) 0.5
Max. pressure at fuel inlet (Bar) 0.5
Max. fuel return restriction (Bar) 0.2
Max. fuel inlet temperature (°C) 50
Fuel supply flow (L/hr) 1900
Min. internal diameter of inlet pipe (mm) 19
Min. internal diameter of return pipe (mm) 19

Electrical system

Electrical system voltage (negative to ground) (Vdc) 24
Starter power (kW) ..... 2 x 8.5
Battery charger current (A) 55
Battery charger absorbed power (kW) 1.6
Max. electric resistance of starting circuit (Ω) 0.008
Min. sectional area of wire (mm²) 95
Min. cold start temperature without auxiliary starting device (°C) [3] ..... - 10
Min. cold start temperature with auxiliary starting device (°C) [3] ..... - 25

[1] The indicated value is based on the AOT value of 50°C for an engine tested at 100% of the ESP Power, reflecting temperature in an open condition, without an enclosure or container, without any airflow obstruction in the front of the radiator, without air recirculation, with free exhaust gas exit and with the engine thermostatic valve in its full open condition, without a closing plate present. The reference air restriction is equal to 50Pa. For the equivalent ATB (Air-to-Boil) performance in a customer or project basis, please consult Baudouin Application Engineering.

[2] This refers only to the frequency response of the engine and should not be confused with the performance class of the Generator Set, which is subject to additional contributing factors such as alternator selection and control settings.

[3] Engines used in emergency standby application or applications that require immediate start under load, they must be equipped with coolant heaters. Baudouin recommend heaters installation to be executed by providing constant coolant circulation across all the engine components. Two heaters are required for V-type engines, one per each side.

Noise

Diesel engine noise (Acoustic power level) (dB(A)) 120.3
Noise - upper side (dB(A)) 102.6
Noise - right side (view from flywheel) (dB(A)) 102.1
Noise - left side (view from flywheel) (dB(A)) 104.3
Noise – front (radiator) side (dB(A)) 101.7
Noise – rear (flywheel) side (dB(A)) 103

Notes :

a) Noise test made at 100% of the ESP power, at 1 mt. distance, on engine without radiator, without cooling fan and without silencer.
b) Noise test refers to ISO 6798 norm : "Reciprocating internal combustion engines. Measurement of emitted airborne noise. Engineering method and survey method".

Fuel consumption

Rating	gr/kWh	L/hr
100% ESP	213.6	427.2
100% PRP	221.8	404
75% PRP	223.9	305.9
50% PRP	227.8	207.5
25% PRP	255	116.1
	Fuel consumption tolerance +/- 5%	

Notes:

This engine is designed for ESP (Emergency Standby) applications only, the values shown above at PRP levels refer to the Referenced Power (1530 kWm).

Ratings definitions

Emergency Standby Power (ESP)

Emergency Standby Power is the maximum power available for a varying load for the duration of a main power network failure. The average load factor over 24 hours of operation should not exceed 70% of the engine's ESP power rating. Typical operational hours of the engine is 200 hours per year, with a maximum usage of 500 hours per year. This includes an annual maximum of 25 hours per year at the ESP power rating. No overload capability is allowed. The engine is not to be used for sustained utility paralleling applications.

Prime Power (PRP)

Prime Power is the maximum power available for unlimited hours of usage in a variable load application. The average load factor should not exceed 70% of the engine's PRP power rating during any 24 hour period. An overload capability of 10% is available, however, this is limited to 1 hour within every 12 hour period.

1) All ratings are based on operating conditions under ISO 8528-1, ISO 3046, DIN6271. Performance tolerance of ±5%.
2) Test conditions : 100 kPa, 25°C air inlet temperature, relative humidity of 30%, with fuel density 0.84 kg/L. Derating may be required for conditions outside these; please contact the factory for details.
3) Power output curves are based on the engine operating with fuel system, water pump and lubricating oil pump; not included are battery charging alternator, fan and optional equipment.

HOJA DE DATOS
Alternadores Sincrónicos

Cliente	:	Notas:	
Referencia del cliente	:		
Línea del producto	: AG10-400MI80FI	Código del producto	: 14417395
Clasificación de area	: Segura		1010981534

Datos generales

Carcasa (IEC)	: 400	Grado de protección	: IP23
Clase de aislamiento	: 180°C (H)	Forma constructiva	: B35T
Distorsión armónica total (sin carga) (%)	: ≤ 3%	Polos - Tipo de polos	: 4
Paso del bobinado del estator principal	: 5/6	Tipo de polo	: Saliente
Altitud	: hasta 1000 m	Rotación (rpm) - 50Hz	: 1800 rpm
Número de Terminales	: 6	Rotación (rpm) - 60Hz	: 1800 rpm
Factor de potencia	: 0.8 hasta 1.0	Sobrevelocidad (rpm)	: 2250 rpm
Sistema de excitación	: Brushless con bobina auxiliar	Masa del alternador	: 4020 kg
Refrigeración	: IC01	Sobrecarga	: 1.1x In por 1h cada 6h
		Sobrecarga Momentánea	: 1.5x In por 30s

	Frecuencia y número de fases										
							60 Hz				
		Trifásico			Monofásico		Trifásico				Monofásico
Tensión (V)	Conexión Y				-		**600**				-
	Conexión YY				-						-
	Conexión Δ				-		346				-
	Conexión ΔΔ				-						-
	Zig-zag paral o triáng monof.	-	-	-	-		-	-	-	-	-
Potências (kVA)	Continuo 80/40						1520				
	Continuo 105/40						1741				
	Continuo 125/40						**1900**				
	Standby 150/40						2000				
	Standby 163/27						2050				
Datos eléctricos (FP=0,8 / continuo 125/40 (H)) Valores de reactancias saturadas	Xd(%) React. síncrónica eje directo						289.4				
	X'd(%) React. trans. de eje directo						20.2				
	X"d(%) React. subtrans. eje directo						12.5				
	Xq(%) React. sinc. eje en cuadratura						79.6				
	X"q(%) React. subt. eje en cuadratura						12.2				
	X2(%) React. sec. neg. eje cuadratura						12.4				
	X0(%) React. secuencia cero saturada						2.1				
	T'd(ms) Cte trans. eje dir. C. Circ.						236.4				
	T"d(ms) Cte subt. eje dir. cortocirc						1.6				
	T'do(ms) Cte Trans circ. abierto sat.						3455				
	T"do(ms) Cte subtrans. circ abierto						5.2				
	Ta(ms) Cte cortocirc. armadura						33				
	uc(V) Voltaje excitación nominal						50.0				
	ic(A) Corriente de excitación nominal						4.2				
	ic(A) Corriente excitación sin carga						1.0				
	Icc(A) Corriente mantenim. de cortoc.						5485				
	Kcc Relación de cortocircuito						0.35				

	Factor de potencia									0.8	1.0								
Rendimientos (%)	25% de carga									92.1	93.7								
	50% de carga									95.1	96.3								
	75% de carga									95.9	96.9								
	100% de carga									96.1	97.1								
	125% de carga									96.1	97.1								

Demais caracteristicas

Flujo de aire	: 1.92 m³/s
Resistencia del estator de la excitatriz a 20ºC	: 11.7 ohm
Resistencia del estator principal a 20ºC	: 0.00126 ohm
Resistencia del rotor	: 1.77 ohm
Camadas del bobinado del estator	: 2
Inercia WR2	: 0.0 kgm²
Rodamiento trasero	: 6319 C3
Rodamiento LA	: 6326 C3
Brida	: SAE 0
Disco de acoplamiento	: SIN

Regulador de voltaje

Precisión (estabilidad)	: +/- 0.5%
Corriente nominal	: 7 A
Entrada analogica	: Sí
Entrada digital	: No
Corriente de pico	: 10 A/10 s
Droop / TC	: Sí
Respuesta dinámica	: 8 hasta 500 ms
U/F	: Sí
Ajuste interno de voltaje	: +/- 15%
Ajuste externo de voltaje	: +/- 10%
Tiempo de respuesta transitoria para ΔU=20%	: 500 ms

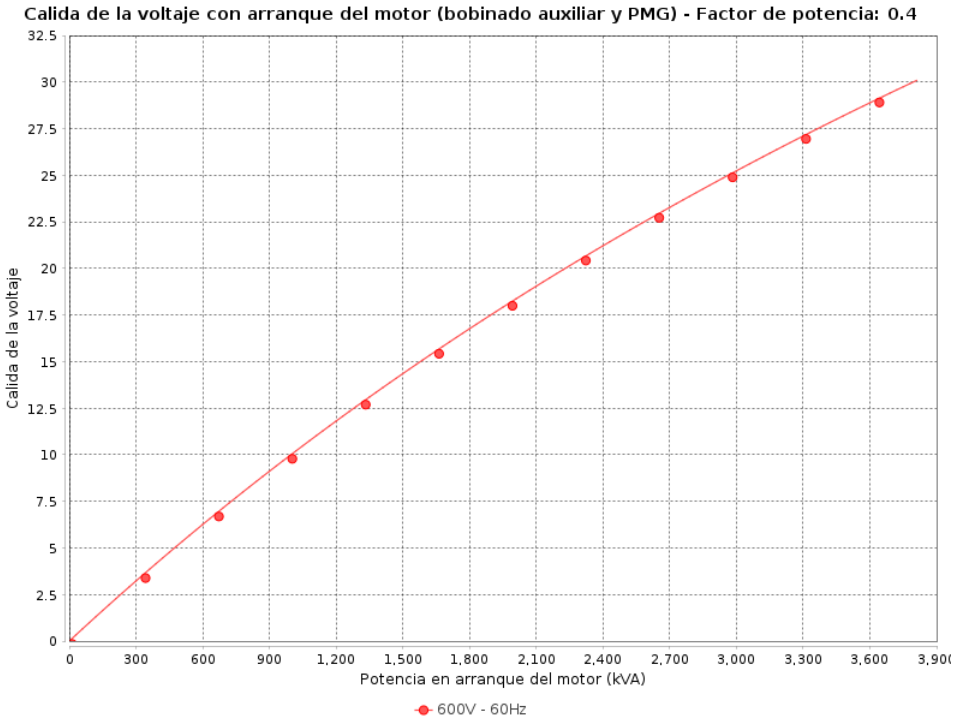
Conforme normas:

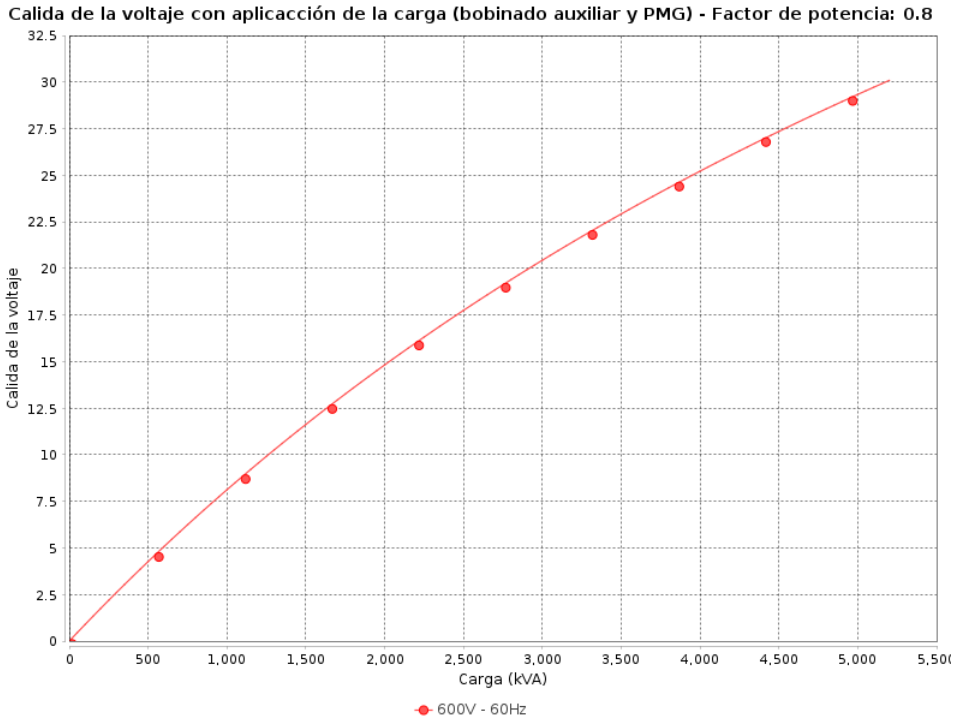
IEC 60034
NBR 5117
NEMA MG1
VDE530
ISO 8528
CSA

Rev.	Resumen de los cambios	Ejecutado	Verificado	Fecha

Ejecutor			
Verificador		Pagina	Revisión
Fecha	13/12/2023	1 / 6	

HOJA DE DATOS
Alternadores Sincrónicos





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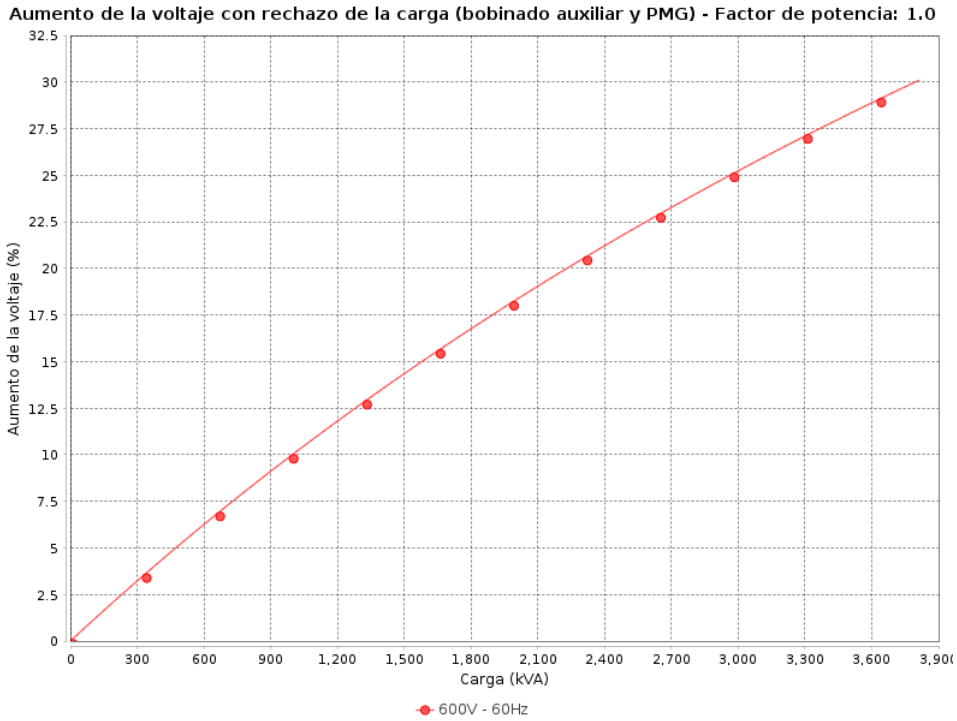

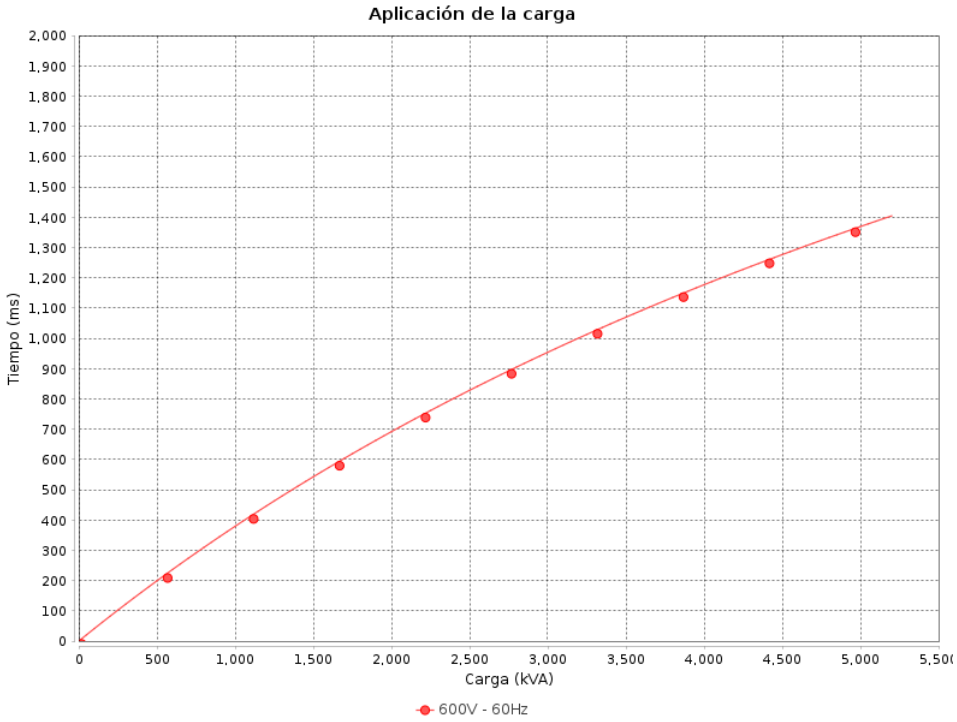

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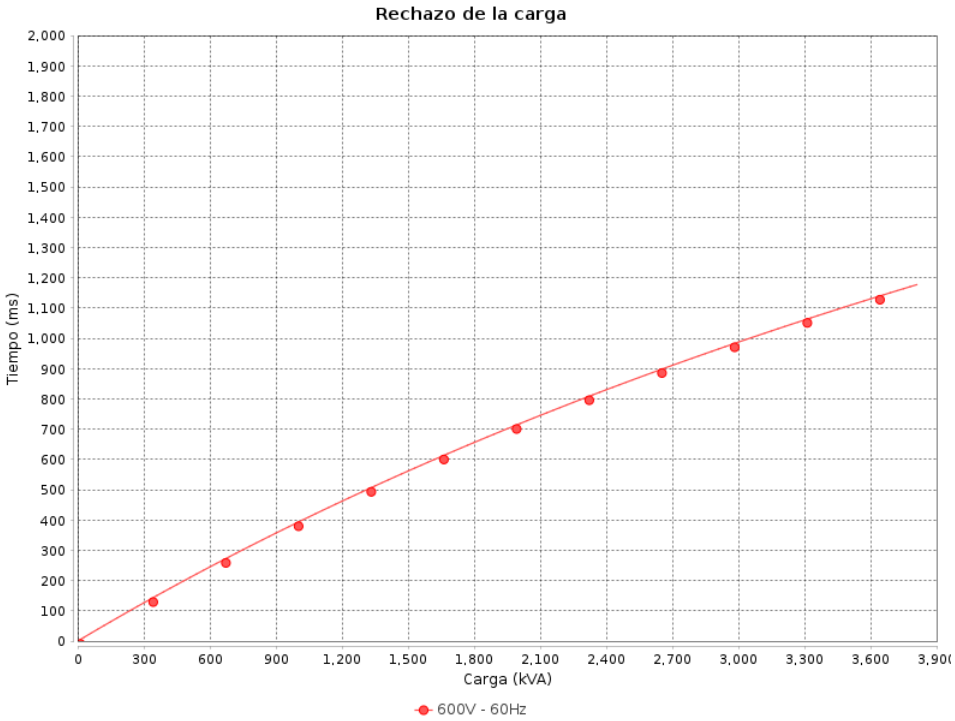

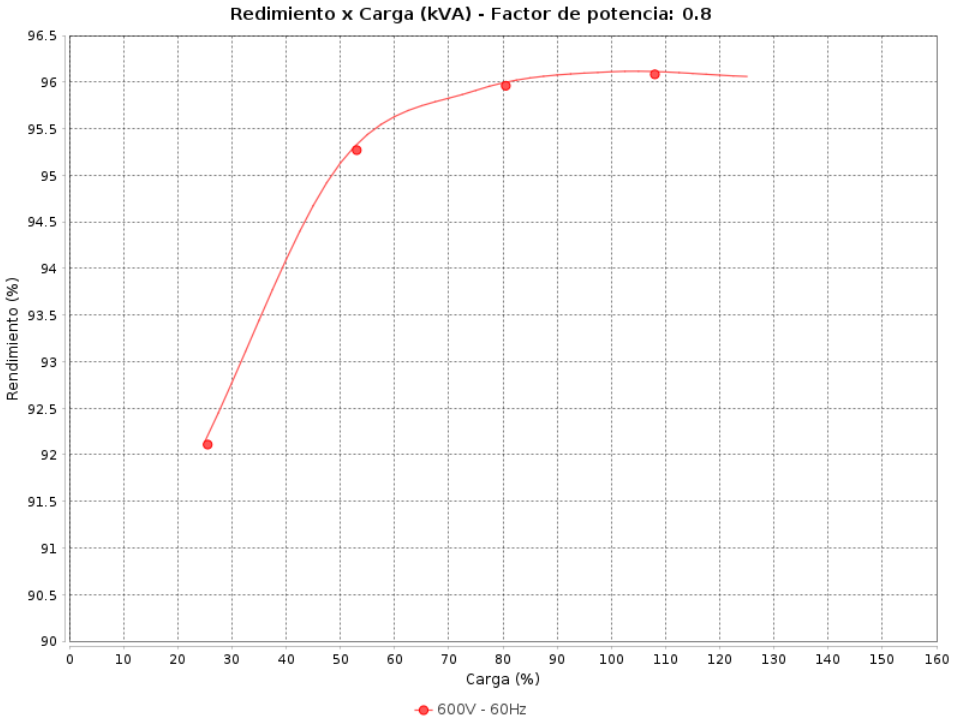

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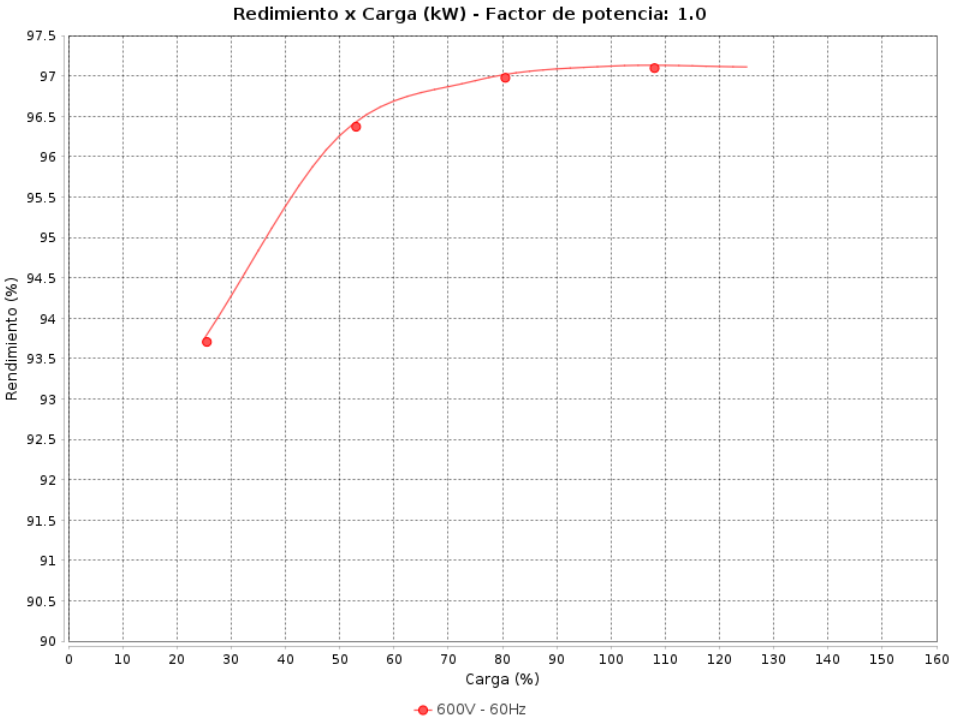
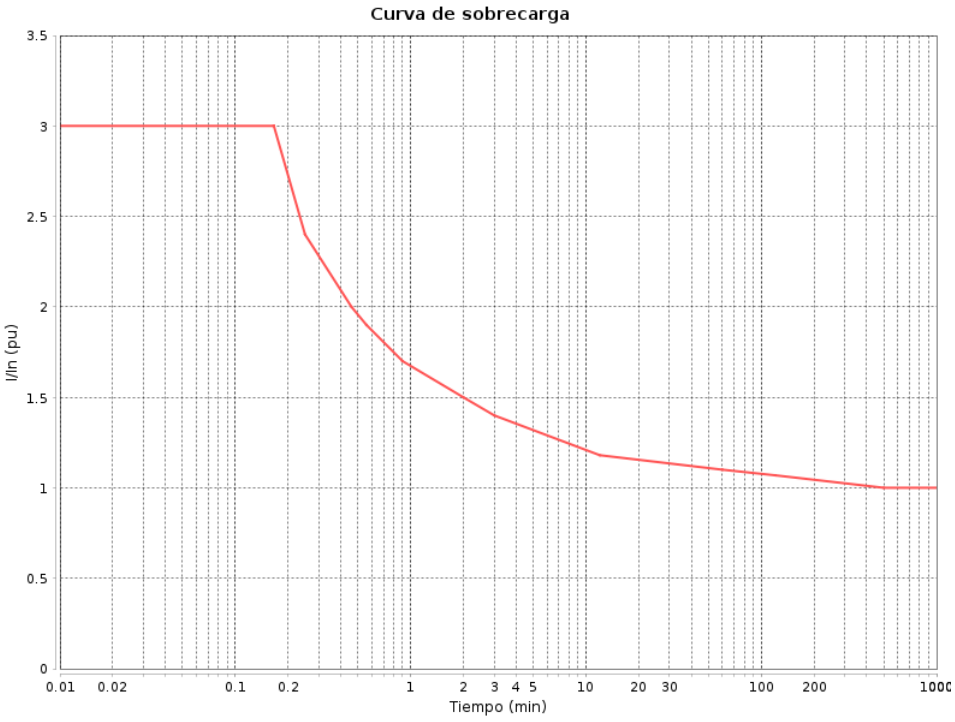
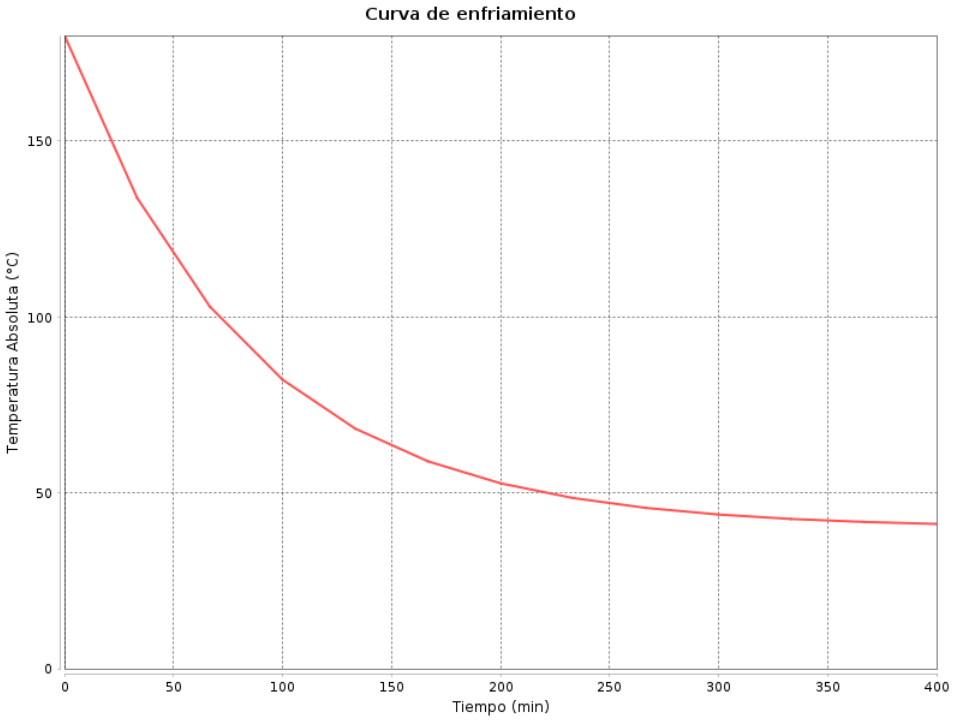




Rev.	Resumen de los cambios	Ejecutado	Verificado	Fecha

Ejecutor				
Verificador			Pagina	Revisión
Fecha	13/12/2023		5 / 6	

HOJA DE DATOS
Alternadores Sincrónicos



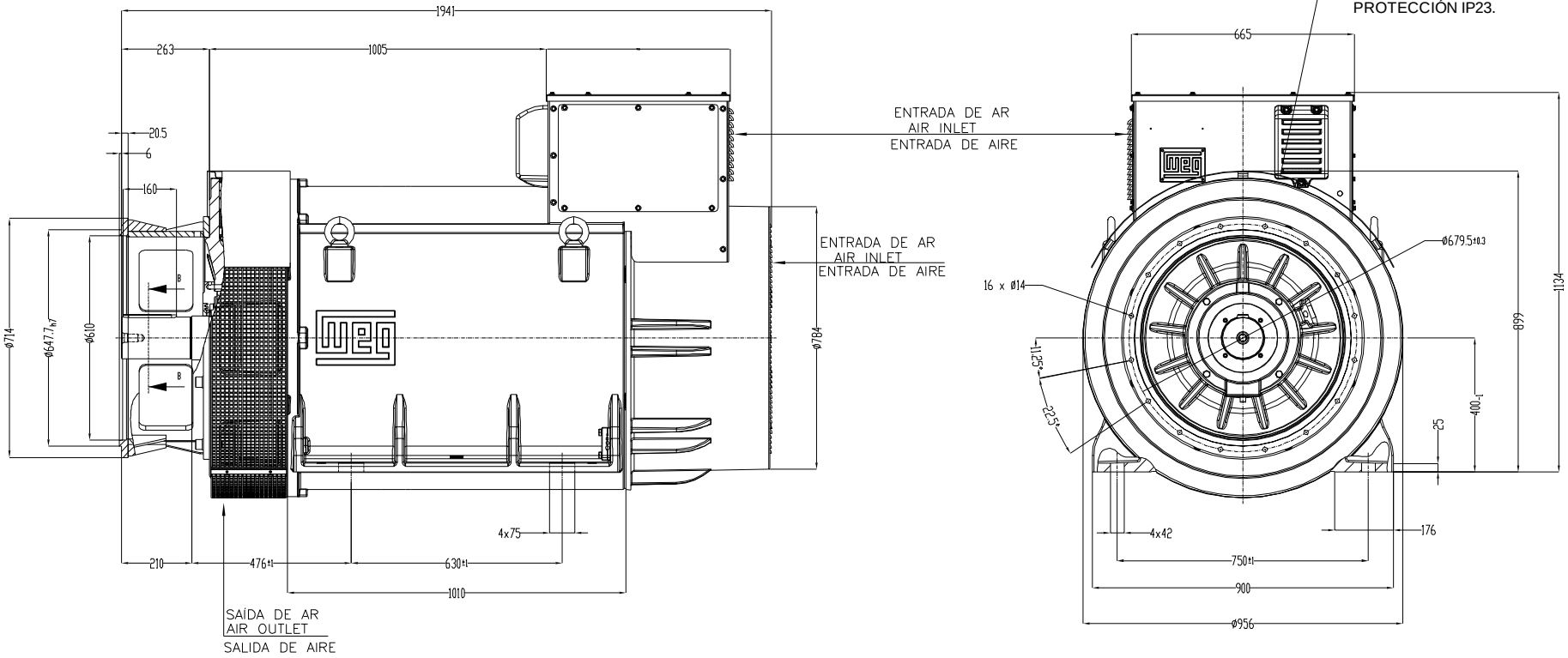
Rev.	Resumen de los cambios	Ejecutado	Verificado	Fecha

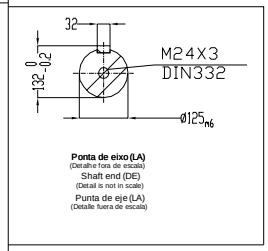
Ejecutor				
Verificador			Pagina	Revisión
Fecha	13/12/2023		6 / 6	

LA - LADO ACIONADO
DE - DRIVE-END SIDE
LA - LADO ACCIONADO

LNA - LADO NÃO ACIONADO
NDE - NON DRIVE-END SIDE
LNA - LADO NO ACCIONADO

APENAS PARA O GRAU DE PROTEÇÃO IP23.
ONLY FOR IP23 PROTECTION.
SOLAMENTE PARA EL GRADO DE PROTECCIÓN IP23.





NOTAS / NOTES / NOTAS
Máquina / Machine / Máquina : AG10 400 - B35T
Grau de proteção / Protection / Grado de protección: IP21 / IP23
Flange de acoplamento / Coupling flange / Brida de acoplamiento: SAE 0

PESO BRUTO / GROSS WEIGHT		PESO LIQUIDO / NET WEIGHT		ESC / SCALE	

ECM / ECM	LOC / LOC	RESUMO MODIFICAÇÃO / SUMMARY OF MODIFICATIONS	EXECUTADO / EXECUTED	VERIFICADO / CHECKED	LIBERADO / RELEASED	DATA / DATE	VER / VER

EXEC. / EXECUTED		DIMENSIONAL AG10 400 B35T	10005703758
VERIF. / CHECKED			000 | 00
LIBER. / RELEASED			
DATA LB / REL DT	24/04/2018		FOLHA / SHEET 01 / 01

SIMBOLOGY CONTROL

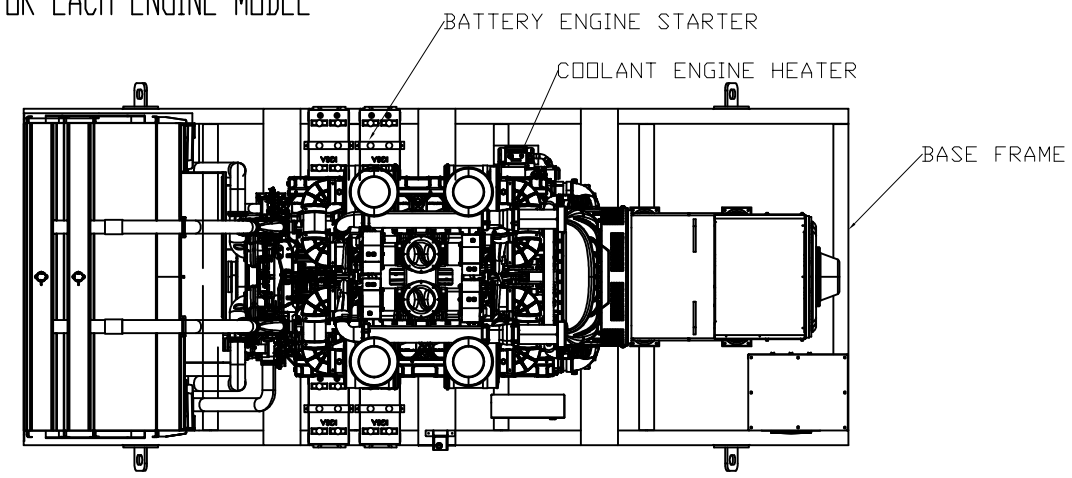
INSPECTION DIMENSION

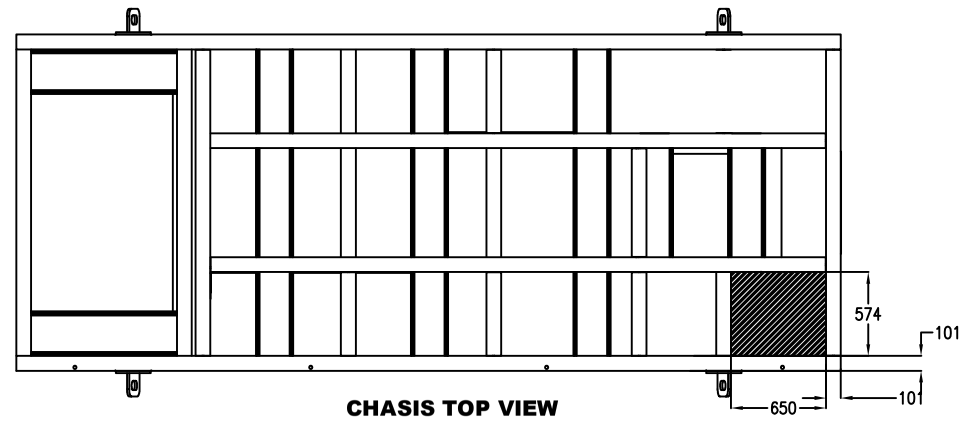
No. DRAWING REVISION

*NOTE: LOCATIONS OF COOLANT HEATER AND BATTERIES ARE DIFFERENT FOR EACH ENGINE MODEL

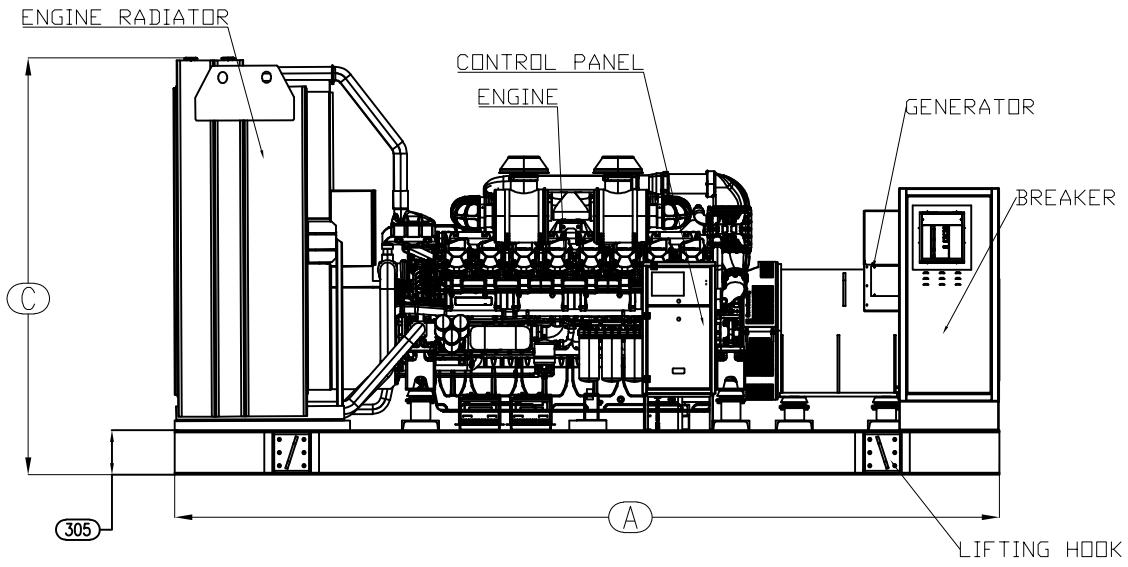
NON SPECIFIED TOLERANCES				
PART TOLERANCES TABLE		GENERAL TOLERANCES		
INTERVAL	TOLERANCE	DIAMETERS		ANGULAR
0" - 40"	± 0.04"	ø	±0.03"	± 2°
40" - 16.5'	± 0.08"			
16.5' - 40'	± 0.12"	ø	0.36"±0.002"	
40' - 328'	± 0.4"			

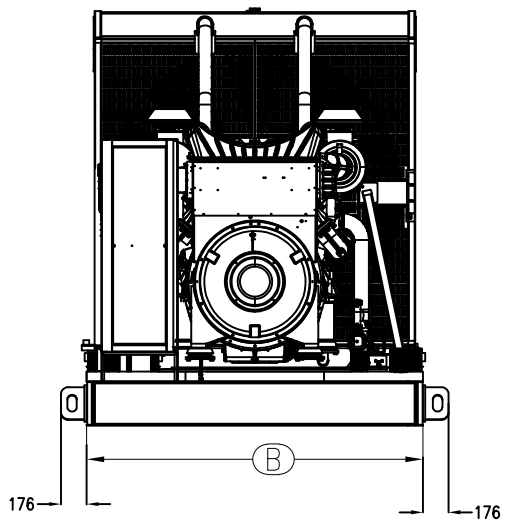
MATERIAL	ITEM	WEIGHT (kg)	FINISH
NA		NA	CLEAN SURFACES FREE OF BURRS

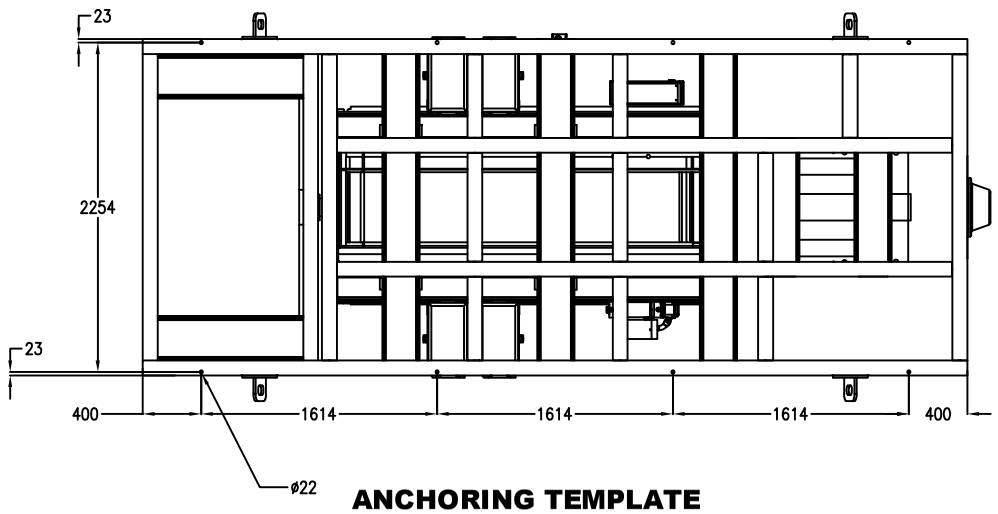




CHASIS TOP VIEW







ANCHORING TEMPLATE

OVERALL DIMENSIONS TABLE OF ACOUSTIC CABIN		
	MINIMUM SIZE	MAXIMUM SIZE
A (LENGTH)	5642	7042
B (WIDE)	2300	2800
C (HIGH)	2852	3352

DEPT.: ENGINEERING	DATE: 17-08-2023	DRAWING: MBG	REVISED: OLM	APPROVED: RMO
SCALE: SIN. ACOT: INCH	CUSTOMER: STD	DRAWING No.: EG WO/C BD 1500-1750 KW		
TITLE: CHASSIS FOR 1500-1750 KW BAUDOUIN ENGINE			REV.: 00	SHEET 1 OF 1

IGSA S.A. DE C.V.
OFFICE GENERAL: RIDE OF REFORM No. 2977, COL. CUAJIMALPA, CP 05000, CDMX. MEX.
PLANT: ANCHOLULCO-OCOYOACAC KM-5 ROAD, LERMA EDO. FROM MEXICO, CP 52740
ENGINEERING DEPARTMENT: TEL: 01 (55) 56265350 Ext: 3018,3020 & 3030,

AUTHORIZED COPY

UNAUTHORIZED COPY

CERTIFICATE OF COMPLIANCE

Certificate Number	UL-US-2345744-0
Report Reference	AU6440-20231107
Date	10-Nov-2023
Issued to:	IGSA S A DE C V PROLONGACION PASEO DE LA REFORMA # 2977 COL CUAJIMALPA MEXICO, Mexico 05000 Mexico
This is to certify that representative samples of	FTSR - Engine Generators See Addendum Page for Product Designation(s).
	Have been evaluated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL 2200, 2nd Ed., Issue Date: 2012-06-01, Revision Date: 2015-07-29
Additional Information:	See the UL Online Certifications Directory at https://iq.ulprospector.com for additional information

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

Deborah Jennings-Conner

Deborah Jennings-Conner, VP Regulatory Services

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number UL-US-2345744-0
Report Reference AU6440-20231107
Date 10-Nov-2023

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
GSBD00700S, GSBD00700L, GSBD00700LT GSBD00700W	Engine Generators
GSBD00800S, GSBD00800L, GSBD00800LT GSBD00800W	Engine Generators
GSBD01000S, GSBD01000L, GSBD01000W	Engine Generators
GSBD01300S, GSBD01300L, GSBD01300W	Engine Generators
GSBD01500S, GSBD01500L, GSBD01500W	Engine Generators
GSBD01700S, GSBD01700L, GSBD01700W, GSBD01750S, GSBD01750L	Engine Generators
GSBD01800S, GSBD01800L	Engine Generators
GSBD02000S, GSBD02000L	Engine Generators
GSBD02300S, GSBD02300L	Engine Generators
GSBD02500S, GSBD02500L	Engine Generators
GSBD02640S, GSBD02640L	Engine Generators
GSBD02800S, GSBD02800L	Engine Generators
GSBD03000S, GSBD03000L	Engine Generators
GSBD03300S, GSBD03300L	Engine Generators
GSBD30600S, GSBD30600L, GSBD30600LT GSBD30600W	Engine Generators
GSBD30633S, GSBD30633L, GSBD30633LT GSBD30633W	Engine Generators
GSBD30644S, GSBD30644L, GSBD30644LT GSBD30644W	Engine Generators

Deborah Jennings-Conner

Deborah Jennings-Conner, VP Regulatory Services

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number	UL-CA-2339551-0
Report Reference	AU6440-20231107
Date	10-Nov-2023

Issued to:

IGSA S A DE C V
PROLONGACION PASEO DE LA REFORMA # 2977
COL CUAJIMALPA
MEXICO, Mexico 05000
Mexico

This is to certify that representative samples of

FTSR7 - Engine Generators Certified for Canada

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety:

CSA C22.2 No. 14, Edition 13, Issue Date 2018-03, Revision Date 2022-06

Additional Information:

See the UL Online Certifications Directory at https://iq.ulprospector.com for additional information

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

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Look for the UL Certification Mark on the product.

Deborah Jennings-Conner

Deborah Jennings-Conner, VP Regulatory Services

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number UL-CA-2339551-0
Report Reference AU6440-20231107
Date 10-Nov-2023

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
GSBD00700S, GSBD00700L, GSBD00700LT GSBD00700W	Engine Generators
GSBD00800S, GSBD00800L, GSBD00800LT GSBD00800W	Engine Generators
GSBD01000S, GSBD01000L, GSBD01000W	Engine Generators
GSBD01300S, GSBD01300L, GSBD01300W	Engine Generators
GSBD01500S, GSBD01500L, GSBD01500W	Engine Generators
GSBD01700S, GSBD01700L, GSBD01700W, GSBD01750S, GSBD01750L	Engine Generators
GSBD01800S, GSBD01800L	Engine Generators
GSBD02000S, GSBD02000L	Engine Generators
GSBD02300S, GSBD02300L	Engine Generators
GSBD02500S, GSBD02500L	Engine Generators
GSBD02640S, GSBD02640L	Engine Generators
GSBD02800S, GSBD02800L	Engine Generators
GSBD03000S, GSBD03000L	Engine Generators
GSBD03300S, GSBD03300L	Engine Generators
GSBD30600S, GSBD30600L, GSBD30600LT GSBD30600W	Engine Generators
GSBD30633S, GSBD30633L, GSBD30633LT GSBD30633W	Engine Generators
GSBD30644S, GSBD30644L, GSBD30644LT GSBD30644W	Engine Generators

Deborah Jennings-Conner

Deborah Jennings-Conner, VP Regulatory Services

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number	MH63698
Report Reference	MH63698-20200103
Issue Date	2020-JANUARY-08
Issued to:	IGSA S A DE C V PROLONGACION PASEO DE LA REFORMA 2977 COL CUAJIMALPA 05000 MEXICO DF MEXICO
This certificate confirms that representative samples of	SPECIAL-PURPOSE TANKS Secondary Containment Generator Base Tanks Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL 142, STANDARD FOR STEEL ABOVEGROUND TANKS FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS. UL 142A STANDARD FOR SPECIAL PURPOSE ABOVEGROUND TANKS FOR SPECIFIC FLAMMABLE OR COMBUSTIBLE LIQUIDS. CAN/ULC S601, STANDARD FOR SHOP FABRICATED STEEL ABOVEGROUND TANKS FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS.
Additional Information:	See the UL Online Certifications Directory at https://iq.ulprospector.com for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC