



INDUSTRIAL RANGE

GENSET KW PERKINS / LEROY SOMER

1. MAIN FEATURES

T	Three-phase		Oil
	Perkins / 1103A-33TG2		Leroy Somer / TAL042H
	Grupel / G545	Hz	50 Hz
	1500 r.p.m.	V	400 V
cos φ	0.8		100 A
Standby Power(ESP)		66 kVA	53 kW
Prime Power (PRP)		60 kVA	48 kW
Continuous Power(COP)		-	-

SOUNDPROOF

Length (L)	2330 mm	
Height (H)	1580 mm	
Width (W)	1015 mm	
Weight	1318 kg	
Daily tank	200 L	
Acoustic pressure level @ 1m		70 ± 3 dB(A)
Acoustic pressure level @ 7m		57 ± 3 dB(A)

2. ROOM INSTALLATION

EXHAUST SYSTEM	50 Hz		
	COP	PRP	ESP
Exhaust gas temperature (°C)	-	557	571
Exhaust gas flow (m³/min)	-	10.1	10.4
Evacuated heat (kW)	-	41	46
Maximum back pressure (kPa)	10		
Exhaust silencer attenuation (dB)	18-25		
Output diameter (mm)	90		

VENTILATION SYSTEMS	50 Hz		
	COP	PRP	ESP
Combustion air flow (m³/min)	-	3.8	3.9
Cooling airflow (m³/min)	89		
Maximum load losses (Pa)	125		
Alternator cooling air flow (m³/min)	6		

RADIATION	50 Hz		
	COP	PRP	ESP
Engine (kW)	-	10	11
Alternator (kW)	4.83	4.83	5.59





3. ENGINE SPECIFICATIONS

GENERAL SPECIFICATIONS		50Hz
Model	1103A-33TG2	
Emissions (UE/USEPA)	Not applicable / Not applicable	
Performance grade	G2	
Operating method	4 stroke	
Fuel type	Oil	
Refrigeration system	Closed water circuit / antifreeze	
Aspiration system	Turbocharged	
Injection system	Direct	
No. and Cylinder arrangement	3 In-line	
Displacement (L)	3.3	
Cylinder bore (mm)	105	
Cylinder stroke (mm)	127	
Compression ratio	17,25:1	
Regulation	Mechanical	
Rotation speed (r.p.m.)	1500	
Piston speed (m/s)	6.35	
Gross power COP (kWm)	-	
Gross power PRP (kWm)	55	
Gross power ESP (kWm)	60.5	
Fan Power (kWm)	- / 1 / 1	
Net Power COP (kWm)	0	
Net Power PRP (kWm)	53.8	
Net Power ESP (kWm)	59.3	
BMEP COP (kPa)	-	
BMEP PRP (kPa)	1333	
BMEP ESP (kPa)	1467	



CONSUMPTION			50 Hz
Fuel consumption	l/h		g/kWh
ESP	15.9		-
PRP	14.6		-
COP	-		-
75%	10.8		-
50%	7.56		-
Oil consumption	< 0.15% of fuel consumption		

REFERENCE CONDITIONS	
Temperature (°C)	25
Atmospheric pressure (kPa)	100

CAPACITY (°C)	
Coolant (L)	10.2
Oil (L)	8.3

STARTING SYSTEM	
Voltage (V)	12
Power (kW)	3
Battery (Ah)	100

4. ALTERNATOR SPECIFICATIONS

GENERAL SPECIFICATIONS	
Model	TAL042H
Phases No.	Three-phase
Protection	IP23
Insulation	H
Temperature rise	H
R.F.I. telephone interference	THF < 2%
R.F.I. Suppression	IEC 61000-6-2/3/4, VDE 0875G/N, EN 55011
Coupling	Flexible disks
Support	Single bearing



Wave form distortion with no load	< 2%
Wave form distortion with balanced linear load	< 5%
Winding Leads	6
Excitation (standard/optional)	SHUNT / AREP+ / PMG
AVR Model (standard/optional)	R120 / R180 / R180
Voltage Regulation (standard/optional)	± 1 % / ± 0,5 % / ± 0,5 %
Icc (standard/optional)	- / 2,7In:5s

PF (cos Ø)	Phase	Voltage (V)	Power PRP/ESP (kVA)	Efficiency PRP/ESP (%)	Xd	X'd	X''d
0.8	Three-phase	400	60 / 66	89.94 / 89.41	3.03	0.147	0.073



5. CONTROL PANEL



GENSET	Grupel G545
Voltage (F-F / F-N)	● / ●
Current intensity	●
Frequency	●
RMS Values	●
Generator phase sequence	●
Generator earth current [a]	●
No. of registers events	400
Real time clock	●
PIN Protection	●
kWh, kVAR, kVAh, kVAh, cos Ø	●
Synchroscope [i]	○
Nº of available outputs [b]	4
Indication of alarms on LCD	●
Engine run hours	●
Total no. of LED indicators	15
No. of LED alarms	4
Sound signalling alarms	-
Scheduler	●
Fuel level	●

ELECTRICAL NETWORK	Grupel G545
Voltage (F-F / F-N)	● / ●
Current [a]	○
Frequency	●
kVA,kW, cos Ø [a]	○
Inversion control between main-group	●

PROTECTIONS AND ALARMS	Grupel G545
High / low battery voltage	A
Failure in battery charge alternator	A
Failure to stop	A/S
Failure to start	A/S
Low fuel level	A/S
Overload	A/S
Earth leakage	A/S
Asymmetry between phases	A/S
Maintenance	A/S
High / Low generator frequency	A/S
Engine overspeed	A/S
Engine underspeed	A/S
Generator overvoltage	A/S
Generator undervoltage	A/S
ECU Alert (if applicable)	A/S
Low oil pressure	A/S
Low level of radiator water [f]	A/S
Engine high temperature	A/S
Fuel leakage/ theft	A



6. CONTROL PANEL

ENGINE	GrupeL G545
Engine speed	●
Low oil pressure protection	●
Oil pressure reading [c]	○
High temperature engine protection	●
Engine temperature reading [c]	○
Engine battery voltage	●
Intensity of the engine battery [d]	○
Fuel Consumption [e]	●
Low level of radiator water [f]	○
Engine maintenance scheduled	●
COMMUNICATION	GrupeL G545
USB female type B (max. 6m)	●
USB female type A [g]	○
RS232 port (max. 15m)	-
RS485 port (max. 1,2Km)	●
Ethernet port RJ45 [g]	○
GSM + location via MLAT [h]	○
ModBus RTU protocol	●
ModBus TCP protocol [g]	○
SNMP protocol [g]	○
CAN port (max. 40m)	●
MSC port (max. 240m) [i]	○
PLC functionality	●

Legenda

● Available

○ Optional

- Not available

A Warning Alarm

S Stop alarm

[a] Need additional CT

[b] No. of outputs available for standard configuration. The outputs do not include relays and additional terminal connections.

[c] If the information is not provided by the engine-ECU, you need an additional sensor

[d] Needs additional ammeter

[e] If information provided by the engine ECU

[f] Required additional sensor

[g] Requires G-ETH

[h] Requires G-GSM

[i] Requires G-Sync

APPLICATIONS	GrupeL G545
Automatic or manual starting	●
Remote start by NO dry contact	●
Automatic by mains failure	●
Alternating with timesharing	●
Multi-generators synchronization and load sharing (max. 48 generators) [i]	○
Generator-Main in synchronism and load sharing (1 generator and 1 main) [i]	○

OPTIONAL EXPANSIONS	GrupeL G545
G-08 (8 dig. inputs)	○
G-06 (8 relay outputs)	○
G-GSM (GSM and/or GPS by MLAT)	○
G-ETH (ethernet module)	○
G-ETH (ethernet module according SNMP protocol)	○
G545 (mirror controller, maximum distance 1km)	○
G175 (convert QTC into QTA)	○
G545 (convert QTC into QTA)	○

STANDARDS

Working temperature	-30 ≤ °C ≤ 70
Protection index (when assembled with sealing gasket)	IP65 - Quando montado com junta de vedação
Degree of humidity (during 48hr)	93%, 40°C durante 48h

Dimensions and guiding weights. Environmental reference conditions: 100kPa, 25 °C, 30% relative humidity and fuel temperature below 40 °C. Power ratings according to ISO 8528-1:2018.

Emergency power (ESP): Maximum power available to supply variable loads for a maximum period of 200h/year. The average load factor in 24h of operation must not exceed 70% of the ESP regime. It does not allow overload.

Prime power (PRP): Maximum power available to supply variable loads for an unlimited number of hours. The average load factor in 24 hours of operation must not exceed 70% of the PRP rating. Allows an overload of 10% for a maximum period of 1 hour every 12 hours of operation. Overloading may not exceed 25 hours/year.

Continuous power (COP): Maximum power available to supply constant loads for an unlimited number of hours per year, between the maintenance intervals and environmental conditions advertised by the manufacturer.

These specifications are subject to change without notice.

DISTRIBUTOR



Parque Industrial do Soza, Parcela A, Lt. 5 - 3840-342 - Vagos - Portugal
T: +351 234 790 070 F: (+351) 234 920 670 - geral@grupel.eu - www.grupel.eu