









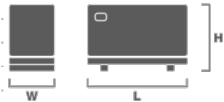
## SMART RANGE

## GENSET 15 kVA PERKINS / LEROY SOMER

### 1. MAIN FEATURES

<b>T</b> Three-phase	 Diesel	
 Perkins / 403A-15G2	 Leroy Somer / TAL040D	
 DeepSea / 4520	<b>Hz</b> 50 Hz	
 1500 r.p.m.	<b>V</b> 400 V	
<b>cos φ</b> 0.8	 25 A	
Standby Power(ESP)	16 kVA	13 kW
Prime Power (PRP)	15 kVA	12 kW
Continuous Power(COP)	-	-

#### SOUNDPROOF

Length (L)	1620 mm	
Height (H)	1120 mm	
Width (W)	725 mm	
Weight	570 kg	
Fuel tank daily capacity	45 L	
Acoustic pressure level @ 1m	79 ± 2 dB(A)	
Acoustic pressure level @ 7m	71 ± 2 dB(A)	

### 2. ROOM INSTALLATION

EXHAUST SYSTEM	50 Hz		
	COP	PRP	ESP
Exhaust gas temperature (°C)	-	470	580
Exhaust gas flow (m³/min)	-	2.2	-
Evacuated heat (kW)	-	10. 7	11. 6
Maximum back pressure (kPa)	10.2		
Exhaust silencer attenuation (dB)	18-25		
Output diameter (mm)	65		

VENTILATION SYSTEMS	50 Hz		
	COP	PRP	ESP
Combustion air flow (m³/min)	-	1	-
Cooling airflow (m³/min)	41.4		
Maximum load losses (Pa)	83		
Alternator cooling air flow (m³/min)	3.6		

RADIATION	50 Hz		
	COP	PRP	ESP
Engine (kW)	-	3.5	4
Alternator (kW)	1.7 7	1.7 7	2.0 1



### 3. ENGINE SPECIFICATIONS

GENERAL SPECIFICATIONS		50Hz
Model		403A-15G2
Emissions (UE/USEPA)		Not applicable / Not applicable
Performance grade		G2
Operating method		4 stroke
Fuel type		Diesel
Refrigeration system		Closed water circuit / antifreeze
Aspiration system		Natural
Injection system		Indirect
No. and Cylinder arrangement		3 In-line
Displacement (L)		1.496
Cylinder bore (mm)		84
Cylinder stroke (mm)		90
Compression ratio		22,5:1
Regulation		Mechanical / Electronic (optional)
Rotation speed (r.p.m.)		1500
Piston speed (m/s)		4.5
Gross power COP (kWm)		-
Gross power PRP (kWm)		14
Gross power ESP (kWm)		15.4
Fan Power (kWm)		- / 0 / 0
Net Power COP (kWm)		-
Net Power PRP (kWm)		13.84
Net Power ESP (kWm)		15.24
BMEP COP (kPa)		-
BMEP PRP (kPa)		746
BMEP ESP (kPa)		820



CONSUMPTION		50 Hz	
Fuel consumption	l/h		g/kWh
ESP	5.04		277
PRP	4.3		260
COP	-		-
75%	3.11		251
50%	2.24		271
Oil consumption	< 0.1% of fuel consumption		

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

CAPACITY (°C)	
Coolant (L)	6
Oil (L)	4.5

STARTING SYSTEM	
Voltage (V)	12
Power (kW)	2
Battery (Ah)	62

### 4. ALTERNATOR SPECIFICATIONS

GENERAL SPECIFICATIONS	
Model	TAL040D
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

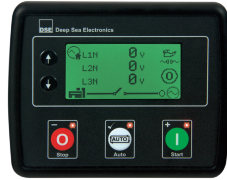


Wave form distortion with no load	< 3,5%
Wave form distortion with balanced linear load	< 5%
Winding Leads	6
Excitation (standard/optional)	SHUNT / AREP+
AVR Model (standard/optional)	R120 / R180
Voltage Regulation (standard/optional)	± 1 % / ± 0,5 %
Icc (standard/optional)	- / 2,7In:5s

PF (cos Ø)	Phase	Voltage (V)	Power PRP/ESP (kVA)	Efficiency PRP/ESP (%)	Xd	X'd	X''d
0.8	Three-phase	400	15 / 16.5	85.24 / 84.76	1.91	0.169	0.084



## 5. CONTROL PANEL



GENSET	DeepSea 4520
Voltage (F-F / F-N)	● / ●
Current intensity	●
Frequency	●
RMS Values	●
Generator phase sequence	-
Generator earth current [a]	-
No. of registered events	15
Real time clock	●
PIN Protection	●
kWh, kVAr, kVAh, kVArh, cos Ø	●
Synchroscope [i]	-
No. of available outputs [b]	2
Indication of alarms on LCD	●
Hours of engine operation	●
Total no. of LED indicators	3
No. of LED alarms	-
Sound signalling alarms	●
Schedule	●
Fuel level	●

ELECTRICAL GRID	DeepSea 4520
Voltage (F-F / F-N)	● / ●
Current [a]	-
Frequency	●
kVA,kW, cos Ø [a]	-
Inversion control between main-group	●

PROTECTIONS AND ALARMS	DeepSea 4520
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	-
Asymmetry between phases	-
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	-



## 6. CONTROL PANEL

ENGINE	DeepSea 4520	APPLICATIONS	DeepSea 4520
Engine speed	●	Automatic or manual start-up	●
Low oil pressure protection	●	Remote start by dry contact	●
Oil pressure reading [c]	●	Automatic by mains failure	●
High temperature engine protection	●	Alternating with timesharing	-
Engine temperature reading [c]	●	Multi-generators synchronization and load sharing (Max. 32 generators)	-
Engine battery voltage	●	Generator-Mains in synchronism and load sharing (1 generator and 1 mains)	-
Intensity of the engine battery [d]	○		
Fuel Consumption [e]	●		
Low level of radiator water [f]	○		
Scheduled engine maintenance	●		
COMMUNICATION	DeepSea 4520	OPTIONAL EXPANSIONS	DeepSea 4520
USB female type B plug (max. 6m)	●	DSE2130 (8 dig. inputs)	-
USB female type A plug	-	DSE2157 (8 relay outputs)	-
RS232 port (max. 15m)	-	DSE890 (4G LTE and GPS)	○
RS485 port (max. 1,2Km)	-	DSE891 (ethernet module)	○
Ethernet port RJ45 [g/h/i]	○	DSE892 (ethernet module according SNMP protocol)	○
4G LTE + GPS [g]	○	DSE2548 (expansion with 8 additional LEDs)	-
ModBus RTU protocol	-	DSE7320 (mirror controller, maximum distance 1km)	-
ModBus TCP protocol [g/h/i]	-	DSE331 (convert QTC into QTA)	○
SNMP protocol [i]	○	DSE335 (convert QTC into QTA)	○
CAN port (max. 40m)	●		
MSC port (max. 240m)	-		
PLC functionality	-		
Legenda		STANDARDS	
● Available		Working temperature	-30 ≤ °C ≤ 70
○ Optional		Protection degree (front panel)	IP65
- Not available		Degree of humidity (during 48hr)	93%, 40°C
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 DSE890			
[h] Requires DSE891			
[i] Requires DSE892			

Dimensions and weights guidelines. 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 Empresarial de Soza, Parcela A, Lote 5 - 3840-342 - Vagos - Portugal  
T: +351 234 790 070 F: (+351) 234 920 670 - geral@grupel.eu - www.grupel.eu