









INDUSTRIAL RANGE

1 MAIN FEATURES

T Triphasic  Diesel fuel  Perkins / 1706A-E93TAG1  Leroy somer / TAL046G  / 4520

Hz 50Hz  1500 r.p.m. **V** 400V **cos φ** 0,8

Standby power (STP)	343 kVA	274 kW
Prime Power (PRP)	312 kVA	249 kW
Power Continuous (COP)	- kVA	- kW

Hz 60Hz  1800 r.p.m. **V** 480V **cos φ** 0,8

Standby power (STP)	400 kVA	320 kW
Prime Power (PRP)	363 kVA	291 kW
Power Continuous (COP)	- kVA	- kW

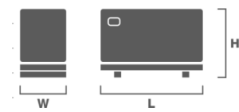
OPEN SKID

Length (L)	3800 mm
Height (H)	1920 mm
Width (W)	1250 mm
Weight	2414 kg
Daily tank	550 L



SOUNDPROOF

Length (L)	3800 mm
Height (H)	1920 mm
Width (W)	1250 mm
Weight	3199 kg
Daily tank	550 L



	50Hz	60Hz
Acoustic pressure level @1m	-	-
Acoustic pressure level @7m	-	-

	50Hz	60Hz
Acoustic pressure level @1m	79 dB(A)	81 dB(A)
Acoustic pressure level @7m	66 dB(A)	68 dB(A)

AVAILABLE VOLTAGES - 50Hz

FP (cos φ)	Phase	Voltage	COP (kVA/kW)	PRP (kVA/kW)	STP (kVA/kW)	Circuit breaker (A)
0,8	Three-phase	440	- / -	309 / 247	340 / 272	630
1	Three-phase	440	- / -	247 / 247	272 / 272	400
0,8	Three-phase	415	- / -	312 / 249	343 / 274	630
1	Three-phase	415	- / -	255 / 255	281 / 281	400
0,8	Three-phase	400	- / -	312 / 249	343 / 274	630
1	Three-phase	400	- / -	255 / 255	281 / 281	400
0,8	Three-phase	380	- / -	311 / 249	342 / 273	630
1	Three-phase	380	- / -	255 / 255	281 / 281	400
0,8	Three-phase	240	- / -	312 / 249	343 / 274	800
1	Three-phase	240	- / -	255 / 255	281 / 281	630
0,8	Three-phase	230	- / -	312 / 249	343 / 274	800
1	Three-phase	230	- / -	255 / 255	281 / 281	800
0,8	Three-phase	220	- / -	309 / 247	340 / 272	1000
1	Three-phase	220	- / -	247 / 247	272 / 272	800
0,8	Single phase	230	- / -	195 / 156	215 / 172	1000
1	Single phase	230	- / -	156 / 156	172 / 172	800
0,8	Single phase	230	- / -	195 / 156	215 / 172	1000
1	Single phase	230	- / -	156 / 156	172 / 172	800
0,8	Single phase	220	- / -	195 / 156	215 / 172	1000
1	Single phase	220	- / -	156 / 156	172 / 172	800

AVAILABLE VOLTAGES - 60Hz

FP (cos φ)	Phase	Voltage	COP (kVA/kW)	PRP (kVA/kW)	STP (kVA/kW)	Circuit breaker (A)
0,8	Three-phase	480	- / -	363 / 291	400 / 320	630
1	Three-phase	480	- / -	297 / 297	327 / 327	400
0,8	Three-phase	440	- / -	363 / 290	400 / 320	630
1	Three-phase	440	- / -	292 / 292	321 / 321	400
0,8	Three-phase	416	- / -	345 / 276	380 / 304	630
1	Three-phase	416	- / -	276 / 276	304 / 304	400
0,8	Three-phase	380	- / -	315 / 252	347 / 277	630
1	Three-phase	380	- / -	252 / 252	277 / 277	400
0,8	Three-phase	240	- / -	363 / 291	400 / 320	1000
1	Three-phase	240	- / -	297 / 297	327 / 327	800
0,8	Three-phase	220	- / -	363 / 290	400 / 320	1000
1	Three-phase	220	- / -	292 / 292	321 / 321	800
0,8	Three-phase	208	- / -	345 / 276	380 / 304	1000
1	Three-phase	208	- / -	276 / 276	304 / 304	800
0,8	Single phase	240	- / -	215 / 172	237 / 190	1000
1	Single phase	240	- / -	172 / 172	190 / 190	800
0,8	Single phase	240	- / -	215 / 172	237 / 189	1000
1	Single phase	240	- / -	172 / 172	189 / 189	800
0,8	Single phase	230	- / -	215 / 172	237 / 190	1000
1	Single phase	230	- / -	172 / 172	190 / 190	800


2 ROOM INSTALLATION

EXHAUST SYSTEM	50 Hz			60 Hz		
	COP	PRP	STP	COP	PRP	STP
Exhaust gas temperature (°C)	-	538,1	548,8	-	481	497,9
Exhaust gas flow (m³/min)	-	41,74	44,46	-	52,31	55,49
Evacuated Heat (kW)	-	229,4 2	252,3 6	-	264,8 4	291,3 3
Maximum back pressure (kPa)	10					
Exhaust silencer attenuation (dB)	30					
Output Diameter (mm)	114					

VENTILATION SYSTEMS	50 Hz			60 Hz		
	COP	PRP	STP	COP	PRP	STP
Combustion air flow (m³/min)	-	15,52	16,5	-	21,44	22,44
Cooling airflow (m³/min)	370			482		
Maximum load losses (Pa)	-					
RADIATION	50 Hz			60 Hz		
	COP	PRP	STP	COP	PRP	STP
Engine (kW)	17,85	17,85	19,64	29,23	29,23	32,15
Alternator (kW)	17,6	17,6	20,2	21,1	21,1	24,0
Alternator (kW)	11,8	11,8	13,4	14,7	14,7	16,5

3 ENGINE SPECIFICATIONS


GENERAL SPECIFICATIONS	50 Hz	60 Hz
Model	1706A-E93TAG1	
Emissions	Not satisfy 97/68/EC	
Performance grade	G3	
Operating method	Four stroke	
Fuel type	Diesel fuel	
Refrigeration system	Water/antifreeze Closed Circuit	
Aspiration system	Turbocharged/intercooler	
Injection system	Common rail	
No. and Cylinder arrangement	6 In-Line	
Displacement (L)	9,29	
Cylinder bore (mm)	115	
Cylinder stroke (mm)	149	
Compression Ratio	16,5:1	
Regulation	Electronic	
Rotation speed	1500	1600
Piston Speed (m/s)	7,4	8,94
Gross power COP (kWm)	-	-
Gross power PRP (kWm)	276,3	325,8
Gross power STP (kWm)	303,9	358,38
Fan power (kWm)	9	15
Net Power COP (kWm)	-	-
Net Power PRP (kWm)	267,3	310,8
Net Power STP (kWm)	294,9	343,38
BMEP COP (kPa)	-	-
BMEP PRP (kPa)	2380	2339
BMEP STP (kPa)	2618	2573



CONSUMPTION		50Hz		60Hz	
Fuel consumption	LOAD	lt/h	g/kWh	lt/h	g/kWh
STP	100%	66,2	189	82,1	193
	75%	62,3	190	75,1	194
	50%	33,6	205	39,9	206
PRP	100%	-	-	-	-
	75%	-	-	-	-
	50%	-	-	-	-
COP	100%	-	-	-	-
	75%	-	-	-	-
	50%	-	-	-	-
Oil consumption		-			
REFERENCE CONDITIONS					
Temperature (°C)		25			
Atmospheric pressure (kPa)		100			
CAPACITY					
Coolant (L)		35,8			
Oil (L)		30			
STARTING SYSTEM					
Voltage (V)		24V			
Power (kW)		6			
Battery (Ah)		155			

4 ALTERNATOR SPECIFICATIONS

GENERAL SPECIFICATIONS	
Model	TAL046G
Phases No.	Triphasic
Protection	IP23
Insulation	H
Temperature Rise	H
50Hz R.F.I. telephone interference	THF<2%
60Hz R.F.I. telephone interference	TIF<50
R.F.I. Suppression	CEM 2014/30/UE
Coupling	Semi-Flexible



Wave form distortion with no load	< 3,5%
Wave form distortion with balanced linear load	< 5%
Winding Leads	6
Excitation (standard / option)	SHUNT / AREP
AVR Model (standard / option)	R150 / R180



INDUSTRIAL RANGE

RATED POWER - 50Hz								RATED POWER - 60Hz							
FP (cos Ø)	Phase	Voltage (V)	Power PRP/STP (kVA)	Efficiency PRP/STP (%)	Xd	X'd	X''d	FP (cos Ø)	Phase	Voltage (V)	Power PRP/STP (kVA)	Efficiency PRP/STP (%)	Xd	X'd	X''d
0,8	Three-phase	440	309 / 340	93,1 / 93,0	2,330	0,112	0,090	0,8	Three-phase	480	406 / 447	93,5 / 93,3	3,090	0,149	0,119
1	Three-phase	440	247 / 272	95,3 / 95,3	2,330	0,112	0,090	1	Three-phase	480	325 / 357	95,5 / 95,4	3,090	0,149	0,119
0,8	Three-phase	415	325 / 358	93,3 / 93,0	2,760	0,133	0,106	0,8	Three-phase	440	365 / 402	93,5 / 93,2	3,310	0,159	0,127
1	Three-phase	415	260 / 286	95,5 / 95,4	2,760	0,133	0,106	1	Three-phase	440	292 / 321	95,4 / 95,3	3,310	0,159	0,127
0,8	Three-phase	400	325 / 358	93,2 / 92,9	2,970	0,143	0,114	0,8	Three-phase	416	345 / 380	93,3 / 93,0	3,500	0,168	0,135
1	Three-phase	400	260 / 286	95,4 / 95,3	2,970	0,143	0,114	1	Three-phase	416	276 / 304	95,3 / 95,2	3,500	0,168	0,135
0,8	Three-phase	380	325 / 358	93,0 / 92,7	3,290	0,158	0,127	0,8	Three-phase	380	315 / 347	93,0 / 92,6	3,830	0,184	0,147
1	Three-phase	380	260 / 286	95,3 / 95,1	3,290	0,158	0,127	1	Three-phase	380	252 / 277	95,1 / 94,9	3,830	0,184	0,147
0,8	Three-phase	240	325 / 358	93,3 / 93,0	2,760	0,133	0,106	0,8	Three-phase	240	406 / 447	93,5 / 93,3	3,090	0,149	0,119
1	Three-phase	240	260 / 286	95,5 / 95,4	2,760	0,133	0,106	1	Three-phase	240	325 / 357	95,5 / 95,4	3,090	0,149	0,119
0,8	Three-phase	230	325 / 358	93,2 / 92,9	2,970	0,143	0,114	0,8	Three-phase	220	365 / 402	93,5 / 93,2	3,310	0,159	0,127
1	Three-phase	230	260 / 286	95,4 / 95,3	2,970	0,143	0,114	1	Three-phase	220	292 / 321	95,4 / 95,3	3,310	0,159	0,127
0,8	Three-phase	220	309 / 340	93,3 / 93,0	2,330	0,112	0,090	0,8	Three-phase	208	345 / 380	93,3 / 93,0	3,500	0,168	0,135
1	Three-phase	220	247 / 272	95,3 / 95,3	2,330	0,112	0,090	1	Three-phase	208	276 / 304	95,3 / 95,2	3,500	0,168	0,135
0,8	Single phase	230	195 / 215	87,4 / 86,8	1,320	0,160	0,130	0,8	Single phase	240	215 / 237	86,1 / 85,4	1,840	0,190	0,150
1	Single phase	230	156 / 172	91,1 / 90,8	1,320	0,160	0,130	1	Single phase	240	172 / 190	90,0 / 89,6	1,840	0,190	0,150
0,8	Single phase	230	195 / 215	90,5 / 89,9	5,390	0,260	0,208	0,8	Single phase	240	215 / 237	89,8 / 89,2	6,550	0,316	0,253
1	Single phase	230	156 / 172	93,5 / 93,1	5,390	0,260	0,208	1	Single phase	240	172 / 189	92,9 / 92,5	6,550	0,316	0,253
0,8	Single phase	220	195 / 215	87,4 / 86,8	1,440	0,170	0,140	0,8	Single phase	230	215 / 237	86,1 / 85,4	2,010	0,210	0,160
1	Single phase	220	156 / 172	91,1 / 90,8	1,440	0,170	0,140	1	Single phase	230	172 / 190	90,0 / 89,6	2,010	0,210	0,160

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CONTROL PANEL



GENSET	DEESEA 4520	OPTIONAL
Voltage (Ph-Ph / Ph-N)	• / •	• / •
Current intensity	•	•
Frequency	•	•
RMS values	•	•
Generator phase sequence	-	o
Generator earth current [a]	-	o
No. of registers events	15	250
Real time clock	•	•
PIN protection	•	•
kWh, kVAh, kVAh, kVAh, cos Ø	•	•
Synchroscope (m)	-	o
Nº of available outputs [b]	2	6
Engine run hours	•	•
Indication of alarms on LCD	•	•
Total no. of LED indicators	3	12
No. of LED alarms	-	4
Sound signalling alarms	•	•
Scheduler	•	•
Fuel Level	•	•

Electrical network	DEESEA 4520	OPTIONAL
Voltage (Ph-Ph / Ph-N)	• / •	• / •
Current intensity [a]	-	o
Frequency	•	•
kVA, kW, cos Ø (a)	-	o
Inversion control between main-group	-	o
Protections and Alarms	DEESEA 4520	OPTIONAL
High / low battery voltage	A	o
Failure in Battery Charge Alternator	A	o
Failure to stop	A/S	A/S
Failure to start	A/S	A/S
Low fuel level	A/S	A/S
Overload	A/S	A/S
Earth leakage	-	o
Asymmetry between phases	-	o
Maintenance	A/S	A/S
High / Low generator frequency	A/S	A/S
Engine overspeed	A/S	A/S
Engine underspeed	A/S	A/S
Generator overvoltage	A/S	A/S
Generator undervoltage	A/S	A/S
ECU Alert (if applicable)	A/S	A/S
Low oil pressure	A/S	A/S
Low level of radiator water [f]	A/S	A/S
Engine high temperature	A/S	A/S
Fuel leakage/ theft	-	o

6 CONTROL PANEL

Engine	DEEPSEA 4520	OPTIONAL
Engine Speed	•	•
Low oil pressure protection	•	•
Oil pressure reading [c]	o	o
High temperature engine protection	•	•
Engine temperature reading [c]	o	o
Engine battery voltage	•	•
Intensity of the engine battery [d]	o	o
Fuel Consumption [e]	•	•
Low level of radiator water [f]	o	o
Engine maintenance scheduled	•	•
Communication	DEEPSEA 4520	OPTIONAL
USB female type B plug (Max. 6m) [g]	•	•
USB female type A plug (n)	-	o
RS232 port (Max. 15m) (n)	-	o
RS485 port (Max. 1,2Km) [h]	-	o
Ethernet port RJ45 [i]	o	o
GSM and/or GPS [j]	o	o
ModBus RTU protocol [h]	-	o
ModBus TCP protocol [i]	-	o
SNMP protocol [l]	o	o
CAN port (Max. 40m)	•	•
MSC port (Max. 240m) (m)	-	o
PLC functionality	-	o

Applications	DEEPSEA 4520	OPTIONAL
Automatic or manual starting	•	•
Remote start by NO dry contact	•	•
Automatic by mains failure	•	•
Alternating with timesharing	-	o
Multi-generators synchronization and load sharing (Max. 32 generators) (m)	-	o
Generator-Main in synchronism and load sharing (1 generator and 1 main) (m)	-	o
Optional expansions	DEEPSEA 4520	OPTIONAL
DSE2130 (8 inputs dig.) IG-IOM (8 in/outputs dig. + 4 inputs anal.) G-08 (8 inputs dig.)	-	o
DSE2157 I-RB8 G-06 (8 relay outputs)	-	o
DSE890 IL-NT-GPRS G-GSM (GSM and/or GPS)	•	•
DSE891 IB-LITE G-ETH (ethernet module)	•	•
DSE892 IB-LITE - (ethernet module according SNMP protocol)	•	•
DSE2548 IGL-RA15 - (expansion with 8 additional LEDs)	-	o
DSE2510 / 20 (mirror controller, maximum distance 1km)	-	o
Standards		
Working temperature	-30 -> 70°C	
Protection index (when assembled with sealing gasket)	IP65	
Degree of humidity (during 48hr)	93% / 40°C	

Legend

•	Available
o	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 the addition of the IL-NT-S-USB module
[h]	Requires the addition of the IL-NT-RS232-485 module
[i]	DeepSea: Requires the addition of the DSE891 module/ ComAp: Requires the addition of the IB-LITE module
[j]	DeepSea: Requires the addition of the DSE890 module/ ComAp: Requires the addition of the IL-NT-GPRS module
[l]	DeepSea: Requires the addition of the DSE892 module/ ComAp: Requires the addition of the IB-LITE module

Indicative weights and dimensions. Reference ambient conditions: 100kPa, 25°C, 30% relative humidity and fuel temperature below 40°C. Power in accordance with ISO 8528: Continuous power (PRP): Maximum available power to feed a variable electrical load for an unlimited period. The average of load factor in 24h of operation, shall not exceed 70% of the PRP. Admits 10% of overload during the maximum period of 1h every 12h of operation. The operation under overload shall not exceed 25h/year. Emergency Power (STP): Maximum available power to feed variable electrical load for a maximum period of 200h/year. The average of load factor in 24h of operation shall not exceed 70% of the STP. No overload. These specifications are subject to change without notice.

Distribuidor