



SMART RANGE

1 MAIN FEATURES

T Triphasic	 Diesel fuel	 Iveco / F32 SM1F	 Grupel / 184GB31	 / 4520
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Hz 50Hz	 1500 r.p.m.	V 400V	cos φ 0,8
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Standby power (STP)	34 kVA	27 kW
Prime Power (PRP)	31 kVA	25 kW
Power Continuous (COP)	- kVA	- kW

Hz 60Hz	 1800 r.p.m.	V 480V	cos φ 0,8
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Standby power (STP)	- kVA	- kW
Prime Power (PRP)	- kVA	- kW
Power Continuous (COP)	- kVA	- kW

OPEN SKID

Length (L)	1700 mm
Height (H)	1110 mm
Width (W)	960 mm
Weight	664 kg
Daily tank	150 L

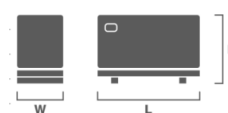


50Hz	60Hz
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Acoustic pressure level @1m	-	-
Acoustic pressure level @7m	-	-

SOUNDPROOF

Length (L)	1950 mm
Height (H)	1110 mm
Width (W)	800 mm
Weight	864 kg
Daily tank	40 L



50Hz	60Hz
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Acoustic pressure level @1m	67 dB(A)	69 dB(A)
Acoustic pressure level @7m	55 dB(A)	57 dB(A)

AVAILABLE VOLTAGES - 50Hz

FP (cos Ø)	Phase	Voltage	COP (kVA/kW)	PRP (kVA/kW)	STP (kVA/kW)	Circuit breaker (A)
0,8	Three-phase	440	- / -	31 / 25	34 / 27	50
0,8	Three-phase	415	- / -	31 / 25	34 / 27	50
0,8	Three-phase	400	- / -	31 / 25	34 / 27	50
0,8	Three-phase	380	- / -	31 / 25	34 / 27	50
0,8	Three-phase	240	- / -	31 / 25	34 / 27	80
0,8	Three-phase	230	- / -	31 / 25	34 / 27	80
0,8	Three-phase	220	- / -	31 / 25	34 / 27	100
0,8	Single phase	240	- / -	19 / 15	20 / 16	80
1	Single phase	240	- / -	14 / 14	15 / 15	63
0,8	Single phase	230	- / -	19 / 15	20 / 16	80
1	Single phase	230	- / -	14 / 14	15 / 15	63
0,8	Single phase	220	- / -	19 / 15	20 / 16	100
1	Single phase	220	- / -	14 / 14	15 / 15	63

AVAILABLE VOLTAGES - 60Hz

FP (cos Ø)	Phase	Voltage	COP (kVA/kW)	PRP (kVA/kW)	STP (kVA/kW)	Circuit breaker (A)
0,8	Three-phase	480	- / -	- / -	- / -	0
0,8	Three-phase	460	- / -	- / -	- / -	0
0,8	Three-phase	440	- / -	- / -	- / -	0
0,8	Three-phase	416	- / -	- / -	- / -	0
0,8	Three-phase	240	- / -	- / -	- / -	0
0,8	Three-phase	230	- / -	- / -	- / -	0
0,8	Three-phase	220	- / -	- / -	- / -	0
0,8	Three-phase	208	- / -	- / -	- / -	0
0,8	Single phase	240	- / -	- / -	- / -	0
1	Single phase	240	- / -	- / -	- / -	0
0,8	Single phase	230	- / -	- / -	- / -	0
1	Single phase	230	- / -	- / -	- / -	0
0,8	Single phase	220	- / -	- / -	- / -	0
1	Single phase	220	- / -	- / -	- / -	0

2 ROOM INSTALLATION

EXHAUST SYSTEM	50 Hz			60 Hz		
	COP	PRP	STP	COP	PRP	STP
Exhaust gas temperature (°C)	-	-	-	-	-	-
Exhaust gas flow (m³/min)	-	-	-	-	-	-
Evacuated Heat (kW)	-	-	-	-	-	-
Maximum back pressure (kPa)			5			
Exhaust silencer attenuation (dB)			30			
Output Diameter (mm)			65			

VENTILATION SYSTEMS	50 Hz			60 Hz		
	COP	PRP	STP	COP	PRP	STP
Combustion air flow (m³/min)	-	-	-	-	-	-
Cooling airflow (m³/min)	84			-		
Maximum load losses (Pa)	-					
RADIATION	50 Hz			60 Hz		
	COP	PRP	STP	COP	PRP	STP
Engine (kW)	-	-	-	-	-	-
Alternator (kW)	3,4	3,4	3,8	4,0	4,0	4,4

3 ENGINE SPECIFICATIONS

GENERAL SPECIFICATIONS	50 Hz	60 Hz
Model	F32 SM1F	
Emissions	Not satisfy 97/68/EC	
Performance grade	G2	
Operating method	Four stroke	
Fuel type	Diesel fuel	
Refrigeration system	Water/antifreeze Closed Circuit	
Aspiration system	Turbocharged	
Injection system	Direct	
No. and Cylinder arrangement	4 In-Line	
Displacement (L)	3,2	
Cylinder bore (mm)	99	
Cylinder stroke (mm)	104	
Compression Ratio	18:1	
Regulation	Mechanic	
Rotation speed	1500	1800
Piston Speed (m/s)	5,2	-
Gross power COP (kWm)	-	-
Gross power PRP (kWm)	29,1	-
Gross power STP (kWm)	32	-
Fan power (kWm)	0,5	-
Net Power COP (kWm)	-	-
Net Power PRP (kWm)	28,6	-
Net Power STP (kWm)	31,5	-
BMEP COP (kPa)	-	-
BMEP PRP (kPa)	720	-
BMEP STP (kPa)	800	-



CONSUMPTION		50Hz		60Hz	
Fuel consumption	LOAD	lt/h	g/kWh	lt/h	g/kWh
STP	100%	8,4	226,1	-	-
	100%	7,9	226,8	-	-
PRP	75%	6,5	228,8	-	-
	50%	4,6	243,8	-	-
COP	100%	-	-	-	-
	75%	-	-	-	-
	50%	-	-	-	-
Oil consumption		< 0,1% of fuel consumption			
REFERENCE CONDITIONS					
Temperature (°C)		25			
Atmospheric pressure (kPa)		100			
CAPACITY					
Coolant (L)		10,5			
Oil (L)		19,27			
STARTING SYSTEM					
Voltage (V)		12			
Power (kW)		3			
Battery (Ah)		60			

4 ALTERNATOR SPECIFICATIONS

GENERAL SPECIFICATIONS	
Model	184GB31
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	BS EN 61000-6-2 /6-4,VDE 0875G, VDE 0875N.
Coupling	Semi-Flexible
Support	Single bearing



Wave form distortion with no load	< 1,5%
Wave form distortion with balanced linear load	< 5%
Winding Leads	12
Excitation (standard / option)	Self-excited / -
AVR Model (standard / option)	SX460/ -
Voltage Regulation (standard / option)	± 1,0%/ -



SMART 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	31 / 35	87,2 / 87,2	1,560	0,150	0,110	0,8	Three-phase	480	38 / 42	86,8 / 86,8	1,857	0,190	0,119
0,8	Three-phase	415	31 / 35	86,7 / 86,7	1,560	0,150	0,110	0,8	Three-phase	460	38 / 42	86,1 / 86,1	1,857	0,190	0,119
0,8	Three-phase	400	31 / 35	86,4 / 86,4	1,560	0,150	0,110	0,8	Three-phase	440	38 / 42	85,7 / 85,7	1,857	0,190	0,119
0,8	Three-phase	380	31 / 35	85,8 / 85,8	1,560	0,150	0,110	0,8	Three-phase	416	38 / 42	85,0 / 85,0	1,857	0,190	0,119
0,8	Three-phase	240	31 / 35	86,7 / 86,7	1,560	0,150	0,110	0,8	Three-phase	240	38 / 42	86,8 / 86,8	1,857	0,190	0,119
0,8	Three-phase	230	31 / 35	86,4 / 86,4	1,560	0,150	0,110	0,8	Three-phase	230	38 / 42	86,1 / 86,1	1,857	0,190	0,119
0,8	Three-phase	220	31 / 35	87,2 / 87,2	1,560	0,150	0,110	0,8	Three-phase	220	38 / 42	85,7 / 85,7	1,857	0,190	0,119
0,8	Single phase	240	19 / 20	85,3 / 85,3	1,560	0,150	0,110	0,8	Three-phase	208	38 / 42	85,0 / 85,0	1,857	0,190	0,119
1	Single phase	240	18 / 19	85,3 / 85,3	1,560	0,150	0,110	0,8	Single phase	240	21 / 23	85,3 / 85,3	1,857	0,190	0,119
0,8	Single phase	230	19 / 20	85,3 / 85,3	1,560	0,150	0,110	1	Single phase	240	20 / 22	85,3 / 85,3	1,857	0,190	0,119
1	Single phase	230	18 / 19	85,3 / 85,3	1,560	0,150	0,110	0,8	Single phase	230	21 / 23	85,3 / 85,3	1,857	0,190	0,119
0,8	Single phase	220	19 / 20	85,3 / 85,3	1,560	0,150	0,110	1	Single phase	230	20 / 22	85,3 / 85,3	1,857	0,190	0,119
1	Single phase	220	18 / 19	85,3 / 85,3	1,560	0,150	0,110	0,8	Single phase	220	21 / 23	85,3 / 85,3	1,857	0,190	0,119
								1	Single phase	220	20 / 22	85,3 / 85,3	1,857	0,190	0,119

5

CONTROL PANEL



GENSET	DEEPSEA 4520	OPTIONAL
Voltage (Ph-Ph / Ph-N)	• / •	• / •
Current intensity	•	•
Frequency	•	•
RMS values	•	•
Generator phase sequence	-	0
Generator earth current [a]	-	0
No. of registers events	15	250
Real time clock	•	•
PIN protection	•	•
kWh, kVAr, kVAh, kVArh, cos Ø	•	•
Synchroscope (m)	-	0
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	DEEPSEA 4520	OPTIONAL
Voltage (Ph-Ph / Ph-N)	• / •	• / •
Current intensity [a]	-	0
Frequency	•	•
kVA, kW, cos Ø (a)	-	0
Inversion control between main-group	-	0
Protections and Alarms	DEEPSEA 4520	OPTIONAL
High / low battery voltage	A	0
Failure in Battery Charge Alternator	A	0
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	-	0
Asymmetry between phases	-	0
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	-	0

6 CONTROL PANEL

Engine	DEEPSEA 4520	OPTIONAL	Applications	DEEPSEA 4520	OPTIONAL
Engine Speed	•	•	Automatic or manual starting	•	•
Low oil pressure protection	•	•	Remote start by NO dry contact	•	•
Oil pressure reading [c]	0	0	Automatic by mains failure	•	•
High temperature engine protection	•	•	Alternating with timesharing	-	0
Engine temperature reading [c]	0	0	Multi-generators synchronization and load sharing (Max. 32 generators) (m)	-	0
Engine battery voltage	•	•	Generator-Main in synchronism and load sharing (1 generator and 1 main) (m)	-	0
Intensity of the engine battery [d]	0	0			
Fuel Consumption [e]	•	•			
Low level of radiator water [f]	0	0			
Engine maintenance scheduled	•	•			
Communication	DEEPSEA 4520	OPTIONAL	Optional expansions	DEEPSEA 4520	OPTIONAL
USB female type B plug (Max. 6m) [g]	•	•	DSE2130 (8 inputs dig.) IG-IOM (8 in/outputs dig. + 4 inputs anal.) G-08 (8 inputs dig.)	-	0
USB female type A plug (n)	-	0	DSE2157 I-RB8 G-06 (8 relay outputs)	-	0
RS232 port (Max. 15m) (n)	-	0	DSE890 IL-NT-GPRS G-GSM (GSM and/or GPS)	•	•
RS485 port (Max. 1,2Km) [h]	-	0	DSE891 IB-LITE G-ETH (ethernet module)	•	•
Ethernet port RJ45 [i]	0	0	DSE892 IB-LITE - (ethernet module according SNMP protocol)	•	•
GSM and/or GPS [j]	0	0	DSE2548 IGL-RA15 - (expansion with 8 additional LEDs)	-	0
ModBus RTU protocol [h]	-	0	DSE2510 / 20 (mirror controller, maximum distance 1km)	-	0
ModBus TCP protocol [i]	-	0			
SNMP protocol [l]	0	0			
CAN port (Max. 40m)	•	•			
MSC port (Max. 240m) (m)	-	0			
PLC functionality	-	0			

Legend			
•	Available	[d]	Needs additional ammeter
o	Optional	[e]	If information provided by the engine ECU
-	Not available	[f]	Required additional sensor
A	Warning Alarm	[g]	Requires the addition of the IL-NT-S-USB module
S	Stop alarm	[h]	Requires the addition of the IL-NT-RS232-485 module
[a]	Need additional CT	[i]	DeepSea: Requires the addition of the DSE891 module/ ComAp: Requires the addition of the IB-LITE module
[b]	No. of outputs available for standard configuration. The outputs do not include relays and additional terminal connections.	[j]	DeepSea: Requires the addition of the DSE890 module/ ComAp: Requires the addition of the IL-NT-GPRS module
[c]	If the information is not provided by the engine-ECU, you need an additional sensor	[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