

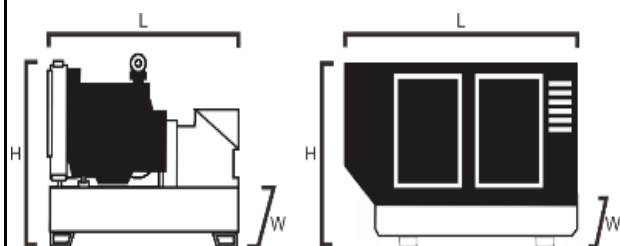
Technical Data

Engine		Alternator			Generator Model	
Lister Petter SA423G1		Leroy-somer TAL-A40-F			FB20X-SA (Open) / FC20X-SA (Silent)	
Frequency	Phase		Power Factor			Emissions
60Hz/1800rpm	3-Phase		Factor Cos Φ = 0.8			N/A
RATINGS	Prime Power		Standby Power		Rated Current	Fuel Consumption @100% Load
	(PRP)		(ESP)		Amps	
Voltage (V)	kWe	kVA	kWe	kVA	(A)	L/h
380/220	16	20	17,6	22,0	30,4	5,89
440/254	16	20	17,6	22,0	26,2	5,89
220/127	16	20	17,6	22,0	52,5	5,89
230/132	16	20	17,6	22,0	50,2	5,89



Key Features:

- High efficient water cooled diesel engine.
- Single bearing with brushless alternators (Class H, with AVR).
- Radiator with pressure cap and drain point.
- Fully guarded engine-driven fan.
- Fully welded steel skid base with lifting holes and fork lift legs.
- Integral fuel tank with filler cap and gauge ($\leq 650\text{kVA}$).
- Heavy duty rubber anti-vibration mountings.
- 12V or 24V maintenance free starter battery and connecting cables.
- Separate engine-driven battery charging alternator.
- Spin on oil and fuel filters and dry type air filter element.
- Industrial silencer (15dBA reduction) supplied loose.
- Auto start control system with LCD show.
- Battery charger provided.
- Main line 3P circuit breaker.
- Rigorous factory test wiring with IEC standard.
- Operation & Maintenance manual & Wiring diagrams.
- Wide range of optional extra features available.



Dimensions & Weights	Open	Silent
Length (L)-mm:	1360	2000
Width (W)-mm:	630	930
Height (H)-mm:	992	1120
Dry Weight-kg:	440	700
Standard Fuel Tank Capacity-L	80	80
(dBA)@7m no load	≤ 85	≤ 65

Ratings:

All three phase generator sets are rated at 0.8 power factor. All single-phase generator sets are rated at 0.8 or 1.0 power factor.

(1)PRP (Prime Power):

Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year accordance with ISO8528-1, and an overload of 10% permitted for one hour in every twelve hours of operation in accordance with ISO 3046-1.

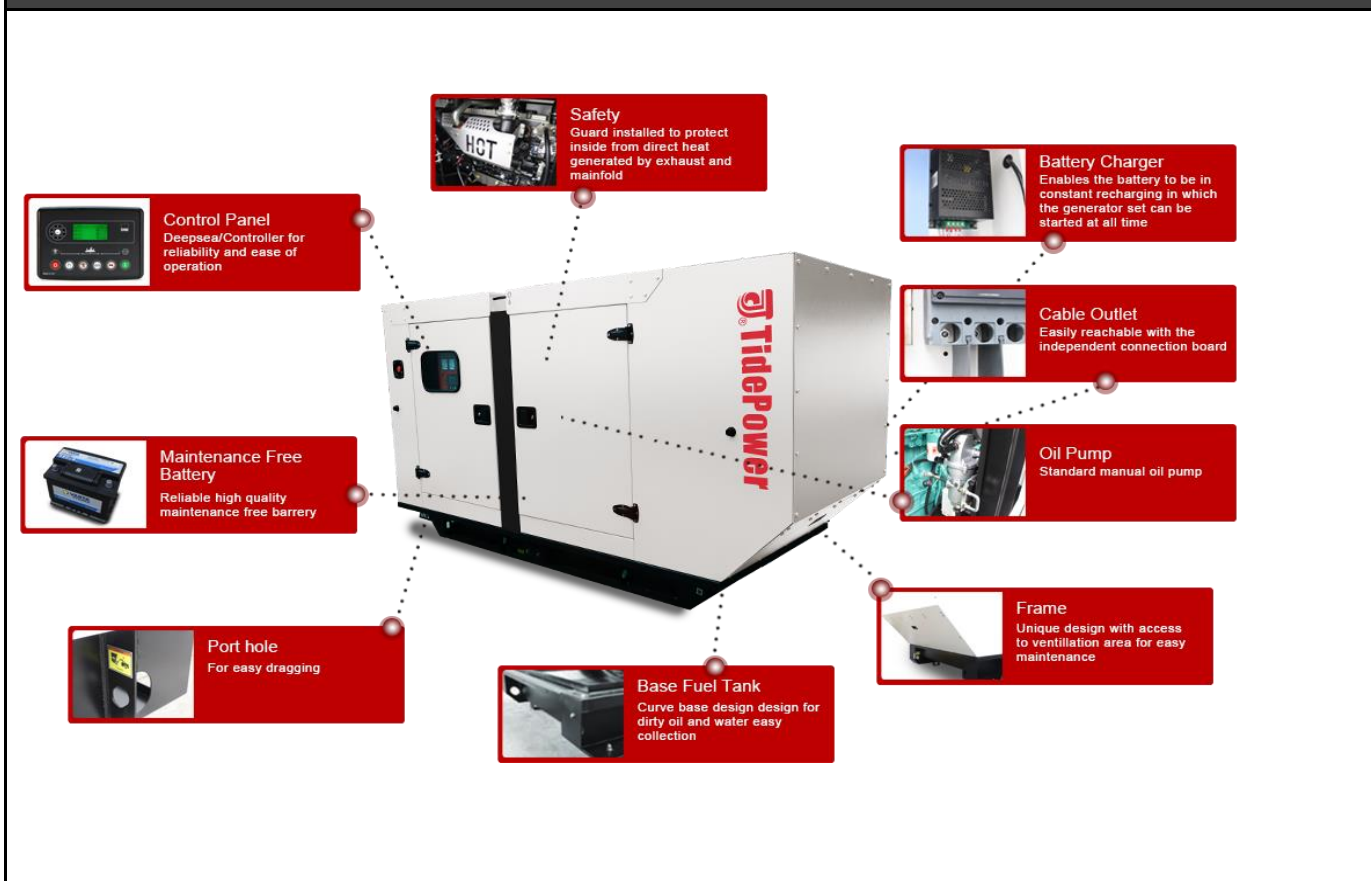
(2)ESP (Standby Power):

Emergency Standby Power in variable load applications in accordance with ISO8528-1 in the event of a utility power failure.

(3)STD:Standard Alternator.

Tide Power reserves the right to change the design or specifications without notice and without any obligation or liability.

FENOVA PULS Series:



The soundproof Generating set range offers a very large application target with powers ranging from 5-650KVA at 50 and 60Hz. The new and sturdy design whether it is canopies or containerized enclosure are with maximum noise reduction which make it suitable for all construction sites and home backup power supply, both mobile and stationary. At all time we have kept in our inventory a largerange of accessories to answer any immediate need, for sales or after sales services. Our standard Deepsea control panel with its stand alone cabinet is equipped with a large display screen, emergency button, ignition barrel and circuit breaker. Like every of our finished products, all the parts of the unit are subject to a stringent operating test involving over 30 checks prior to delivery.

Advantages of FENOVA PLUS:

- Powerful Engine, Large Output Power;
- Stable Performance
- Compact Structure
- Waterproof and Dustproof and weatherproof
- Noise Level 60—80 dBA@7m
- Ambient temperature: -5°C--50°C
- Excellent design and craftsmanship
- Excellent Cooling System
- Automatic Air—Bleeding
- Easy Operation and Maintenance;



Engine	Lister Petter SA423G1		
General Performance	Engine Frequency and Speed	Hz / r/min	60 / 1800
	Engine Power	kWm	21 23
	Type of fuel injection	Direct	
	Number of cylinders	4	
	Aspiration	Natural	
	Nominal cylinder bore×Stoke	mm	85×100
	Total cylinder capacity	Litre	2,27
	Compression ratio	18.5:1	
	Speed governor	Electronic	
	Fly wheel housing	SAE 4	
Fuel System	Fuel Consumption at 110% Prime Power	L/h	6,53
	Fuel Consumption at 100% Prime Power	L/h	5,89
	Fuel Consumption at 75% Prime Power	L/h	4,62
	Fuel Consumption at 50% Prime Power	L/h	3,32
	Fuel Consumption at 25% Prime Power	L/h	2,28
Exhaust and Intake System	Maximum allowable back-pressure	kPa	≤10
	Exhaust gas flow	m ³ /min	2,3
	Exhaust gas temperature, continuous	°C	320
	Exhaust gas temperature, overload	°C	378
	Exhaust pipe diameter - recommended	mm	63,5
	Maximum allowable inlet restriction	kPa	≤ 4
Cooling System	Combustion air flow	m ³ /min	1,1
	Total system with radiator capacity	Litres	9,1
	Total system without radiator capacity	Litres	3,8
	Thermostat type	Wax Capsule	
	Cooling package maximum operating temperature	°C	≤110
	Thermostat opens	°C	82 ± 2
	Thermostat fully open	°C	≤ 95
	Minimum temperature to engine	°C	-25
Lubrication System	Cooling fan flow rate	L/s	27,5
	Sump capacity including filter	Litres	6,0
	Oil consumption, 100% (l/hr)	L/hr	0,006
	Lubricating oil temperature	°C	90-105
Electric System	Maximum oil temperature	°C	108
	Electrical System Voltage	V	12
	Starter motor	12V×2.0kW	
	Battery	Maintenance-free	

Alternator	60Hz/1800rpm	
General Data	Manufacture / Brand	Leroy-somer
	Model	TAL-A40-F
	Coupling / No. of Bearings	Direct / Single Bearing
	Phase / Poles	3-Phase / 4-Pole
	Power Factor	Cos Φ = 0.8
	AVR Regulation	Yes
	Voltage Regulation	±0.5 %
	Insulation Class	H
	Drip Proof	IP23
	Voltage Regulator	AVR
	Altitude	≤1000 m

Tide Power Easycon Function Summary



DSE4520 MKII

FEATURES:

Ø The DSE4510 MKII Auto Start Control Module and the DSE4520 MKII Auto Mains (Utility) Failure Control Module are suitable for a wide variety of single gen-set applications.
Ø Whilst maintaining functions included within higher end controllers, such as generator or load power monitoring, the DSE45xx MKII range of especially compact controllers provide the user with the ultimate size to feature ratio.

Key features :

Ø Auto Start and AMF mode in one module (DSE4520 MKII only)
Ø J1939-75 support and CAN alarm ignore function
Ø Alternator frequency & CAN speed sensing in one variant
Ø Largest back-lit icon display in its class
Ø Heated display option
Ø Real time clock provides accurate event logging
Ø Fully configurable via the fascia or PC using USB communication
Ø Extremely efficient power save mode
Ø 3 phase generator sensing
Ø 3 phase mains (utility) sensing (DSE4520 MKII only)
Ø Compatible with 600 V ph to ph nominal systems
Ø Generator/load power monitoring (kW, kV A, kV Ar, pf)
Ø Accumulated power monitoring (kW h, kVA h, kVAr h)
Ø Generator overload protection (kW)
Ø Generator/load current monitoring and protection
Ø Fuel and start outputs (configurable when using CAN)
Ø 4 configurable DC outputs
Ø 3 configurable analogue/digital inputs
Ø 4 configurable digital inputs
Ø Configurable staged loading outputs
Ø 3 engine maintenance alarms
Ø Engine speed protection
Ø Engine hours counter
Ø Engine pre-heat
Ø Engine run-time scheduler
Ø Engine idle control for starting & stopping
Ø Tier 4 engine instrumentation screens
Ø Battery voltage monitoring
Ø Start on low battery voltage
Ø Configurable remote start input
Ø 1 alternative configuration
Ø Comprehensive warning, electrical trip or shutdown protection upon fault condition
Ø LCD alarm indication
Ø Event log (50)
Ø Fuel solenoid pulling circuit
Ø On-screen line diagram on/off functionality
Ø Configurable CAN instrumentation(10)
Ø Water in fuel digital input
Ø Tank bund alarm digital input
Ø Generator at rest output
Ø ECU periodic wake-up for information retrieval
Ø Back-light power-save mode
Ø Adjustable delay crank timer
Ø Pre/post heat functionality
Ø Overload protection
Ø Mains/generator A/C system selection
Ø Output timer for external audible alarm

Controller Model / Deep Sea	EC3.0
Brand / Model	DSE4520 MKII
Viewable Parameters	
Phase Voltage	3
Current	•
Frequency	•
Active Power	•
Reactive Power	•
Apparent Power	•
Power Factor	•
Electric Energy Metering	•
Generator Protection	
Abnormal Voltage	•
Over-current Warning	•
Over current Protection	•
Over Frequency Protection	•
Short Circuit Protection	×
Engine Figure	
Oil Pressure	•
Water Temperature	•
Fuel Meter / Fuel Sensor	•/○
Speed	•
Battery Voltage	•
Runing hours	•
Engine Protection	
Low Oil Pressure Warning	•
Low Oil Pressure Protection	•
High Temperature Warning	•
High Temperature Protection	•
Overspeed Warning	•
Overspeed Protection	•
Alternator Charger	•
Functions	
Remote Start	•
AMF (Auto Main Failure)	•
Service Indicate	•
Fault History	•
Gen-Gen Synchronising	×
Gen-Mains Synchronising	×

Remark: • Standard Supply
○ Available as Optional
× Not Available