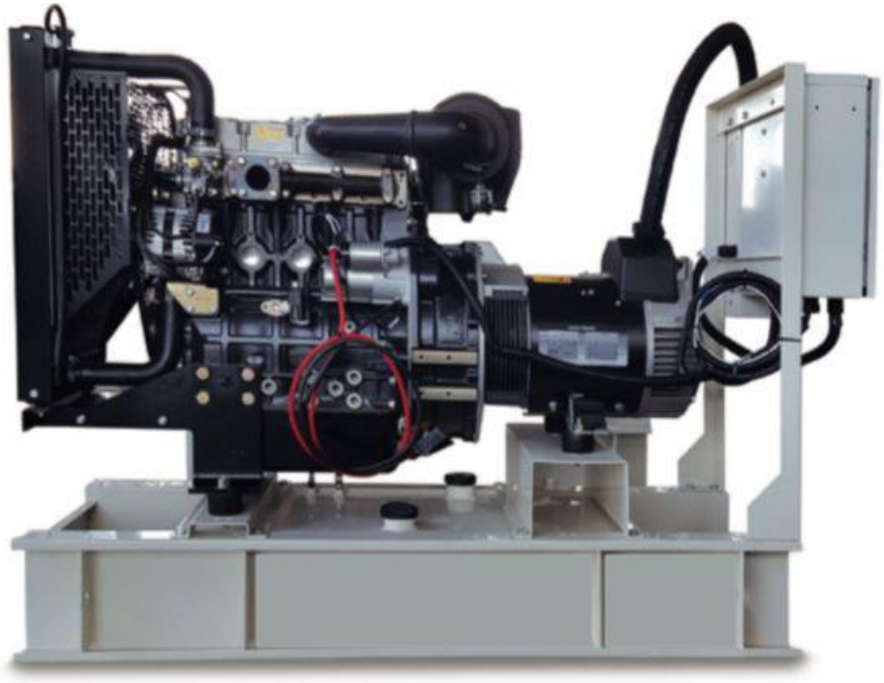
AFRI POWER
GENERATORS & ELECTRICAL PARTS

PL15



POWERED BY:

Perkins Diesel Power

LEROY SOMER

CERTIFIED ★ ISO 9001 ★ GUARANTEE

Generating Set pictured may include optional accessories

STANDARD SPECIFICATIONS

1. ENGINE
Perkins four stroke heavy duty high performance industrial type diesel engine.

2. ENGINE FILTRATION SYSTEM
- Air filter.
- Fuel filter.
- Full flow lube oil filter.

All filters have replaceable elements.

3. COOLING RADIATOR
Radiator and cooling fan, complete with safety guards, designed to cool the engine at high ambient temperatures.

4. EXHAUST SYSTEM
Heavy duty Industrial Exhaust Silencer

5. CIRCUIT BREAKER

5.1 CIRCUIT BREAKER TYPE
Mitsubishi

5.2 CIRCUIT BREAKER SETTING
25A

5.3 MEASUREMENT CT
40/5A

(contd.)

GENERATING SET MODEL		
Output Ratings	**Prime**	**Standby**
400 V, 3 ph, 50Hz, 1500 rpm	13 KVA	15 KVA
	10.4 KW	12 KW

Ratings at 0.8 Power Factor

ENGINE / TECHNICAL DATA	
Engine Make	Perkins
Engine Model	403A-15G1
Governing Type	Mechanical
Number of Cylinders	3
Bore and Stroke mm	84x90
Displacement / Cubic Capacity litres	1.496
Induction System	Naturally Aspirated
Cycle	4 stroke
Combustion System	Indirect Injection
Compression Ratio	22:5:1
Battery	50A
Cooling System	Water - cooled
Frequency and Engine Speed	50Hz & 1500rpm

ALTERNATOR DATA	
Make	Leroy Somer
Model	TAL-040-C
No. of bearings	1
Insulation class	H
Total Harmonic Content	<2%
Wires	6
Ingress Protection	IP23
Excitation System	Self Excited
Winding Pitch	2/3 (wdg 3)
AVR model	R120
Overspeed	2250 mn^{-1}
Voltage Regulation (steady)	± 1%
Short Circuit Capacity	-

PMG Exciting System Available as Optional

CANOPY DATA	
Canopy Type	SILENT
Enclosure Type	Acoustic & Weatherproof
Drainage	Fuel and Water Drainage Provision
Lifting	ISO Standard Lifting
Noise pressure level (dB)	71

	Prime	Standby
Gross Engine Power Kw (hp)	10.4	12
Fuel Consumption @50% load L/hr **@75% load L/hr** **@100% load L/hr**	2.0 2.8 3.7	- - 4.1
Total lubrication system capacity litres	6.0	6.0
Total coolant capacity (inc. radiator) litres	6.0	6.0
Exhaust temperature °C	445	490
Radiator Cooling Air Flow (Min) $m^3/3$	0.42	0.42
Combustion Air Flow m^3/min	1.1	1.1
Exhaust Gas Flow m^3/min	2.7	2.9
Fuel Tank Capacity litres	50	50

DIMENSIONS AND WEIGHT			
Length	**Width**	**Height**	**Weight**
198 cm	78 cm	128 cm	700 kg

LUBRICATION SYSTEM		
Oil Filter Type	**Total Oil Capacity**	**Oil Type**
Spin-On Full Flow	6.0 L	API CI-4

STANDARD SPECIFICATIONS

6. FUEL SYSTEM

On Generating Sets up to 700 KVA, the baseframe design is incorporated with an integral fuel tank with a capacity of approx. 8 hours running at Full Load. The tank is supplied complete with fill cap breather, fuel feed and return lines to the Engine and drain plug.

7. ALTERNATOR

7.1 INSULATION SYSTEM

- The insulation system is Class H.
- All windings are impregnated in either a triple dip thermosetting liquid, oil and acid resisting polyester varnish or vacuum pressure impregnated with a special polyester resin.
- Heavy coat of antitracking varnish additional protection against moisture or condensation.

7.2 AUTOMATIC VOLTAGE REGULATOR (AVR)

The fully sealed Automatic Voltage Regulator maintains the Voltage Regulation at ±1%. Nominal adjustment by means of a trim pot incorporated on the AVR.

7.3 MOTOR STARTING

An overload capacity equivalent to 300% of the Full Load impedance at zero Power Factor can be sustained for 10 seconds, when PMG option is fitted.

8. MOUNTING ARRANGEMENT

8.1 BASE FRAME

The complete Generating Set is mounted as a whole on a heavy duty fabricated steel Baseframe.

8.2 COUPLING

The Engine and Alternator are directly coupled by means of an SAE flange. The Engine flywheel is flexibly coupled to the Alternator rotor.

CONTROL PANEL	
Make	Deep Sea
Type	DSE 4520MKII

The DSE 4520MKII is an advanced generator control module. It's designed to monitor, protect and control our generators. It can handle multiple communication protocols including CAN and RS485, allowing integration with other systems. Provides comprehensive data and alarm monitoring, with real-time performance tracking and remote monitoring options to ensure reliable, efficient generator operation in even the most demanding conditions.

Metering and Alarm indication

- Generator frequency
- Underspeed, Overspeed
- Generator volts (L-L, L-N)
- Generator current
- Engine coolant temperature
- Fuel level (Warning or shutdown) – Optional
- Hours run counter
- Battery volts
- Fails to start/stop
- Emergency stop
- Failed to reach loading voltage/frequency
- Charge fail
- Loss of magnetic pick-up signal- Optional
- Low DC voltage
- CAN diagnostics and CAN fail/error

8.3 ANTI-VIBRATION MOUNTING PADS

Anti-Vibration pads are affixed between the Engine / Alternator feet and the Baseframe thus ensuring complete vibration isolation of the rotating assembly.

8.4 SAFETY GUARDS

The Fan & Fan Drive along with the Battery Charging Alternator are Safety Guard protected for personnel protection.

9. FACTORY TESTS

• The Generating set is load tested before dispatch
• All protective devices control functions and site load conditions are simulated. The generator and it's systems are checked before dispatch.

10. EQUIPMENT FINISHING

All mild steel components are fully degreased and painted with powder coated paint to ensure maximum scuff resistance and durability.

11. DOCUMENTATIONS

Operation & Maintenance manual, Circuit wiring diagrams and Commissioning / Fault Finding instruction leaflets are accompanied with the Generator.

12. QUALITY STANDARDS

The equipment meets the following standards: BS4999, BS5000, BS5514 IEC 60034, VDE0530, NEMA MG 1.22 and ISO 8528.

13. WARRANTY

All of the Generating Sets are covered under a warranty policy for a period of 12 months or 1000hours. Warranty of the equipment is in line with manufacturers warranty terms & conditions.
(check warranty statement for more details, as it may vary for different countries)

RATING DEFINITION

Prime Power

These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. 10% overload power is available for 1 hour in 12 hours continuous operation.

Standby Power

These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings.

STANDARD REFERENCE CONDITIONS

Output ratings are presented at 25°C air inlet temperature, barometric pressure 100 kPa, relative humidity 30%.
This generating set is designed to operate at high ambient temperatures (up to 55°C), humidity (up to 99%) and higher altitudes. De-ration may apply, please consult your dealer for specific site ratings.

Some of the specifications are not standard on all Genset models.

AVAILABLE OPTIONS & ACCESSORIES

We offer a range of optional features and accessories to tailor our generating sets to meet your power needs.

OPTIONS

- A variety of generating set control and synchronizing panels
- Additional protection alarms and shutdowns
- Water fuel separator
- Water jacket heater
- Battery charger

ACCESSORIES

- Genuine spare parts
- Load banks
- Auxiliary fuel tanks
- Manual & automatic transfer switches

Distributed and Serviced by:

AFRI POWER
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