

LAT AIR COOLED GENSETS

LAT 8(A)*, LAT 15(A)*, LAT 24(A)

LISTER PETTER P TYPE ALTERNATOR

50 Hz; 1500 r/min; power outputs: 4.6 - 20.2 kVA

60 Hz; 1800 r/min; power outputs: 5.7 - 24.9 kVA

AIR COOLED GENERATING SETS WITH ELECTRONIC CONTROL MODULE

BASIC CHARACTERISTICS

- 50Hz, 1500 r/min or 60Hz, 1800 r/min
- Lister Petter T Series air cooled, direct injection, naturally aspirated diesel engine (1, 2 or 3 cylinders)
- open set (LAT) or acoustic set (LATA)

STANDARD FEATURES

- control system with electronic digital control module
- single bearing, 4-pole brushless alternator
- 44 litre [LAT8(A), 15(A)] and 66-litre [LAT24(A)] polypropylene fuel tank with contents gauge
- zirconium phosphated powder coated base plate with forklift pockets
- bunded base retaining 110% of all fluids
- anti vibration mountings
- 12V starter battery and leads
- mechanical governing
- emergency stop button (lock-down type)
- flywheel mounted cooling fan
- operators' handbook
- electrical diagrams

OPEN SETS ONLY

- engine mounted exhaust silencer

ACOUSTIC SETS ONLY

- acoustic canopy
- residential exhaust silencer
- 2 off roof mounted lifting eye bolt fixings
- external emergency stop button
- tough ripple effect paint finish
- earth straps on service doors
- large side door for easy service access
- document pocket in access door



OPEN GENSET (LAT)



ACOUSTIC GENSET (LATA)

ALTERNATOR SPECIFICATION

- single bearing, 4-pole brushless alternator
- solid state AVR with $\pm 1.5\%$ voltage regulation as standard
- class H insulation on the rotor and stator
- IP23 protection class

CONTROL CUBICLE

All LAT and LATA sets have a vibration-isolated control cubicle, which has the following features:

- electronic digital control module with monitoring/control facility and warning indicators
- automatic solid-state 4-Amp battery charger
- automatic shutdown protection
- emergency stop button (lock-down type) – open sets only
- AC output circuit breaker with over-current protection
- DC circuit control switch and overload circuit breaker

The control module gives digital readouts of:

- generator voltage (phase-to-phase and phase-to-neutral)
- generator current (each phase displayed separately)
- generator output frequency
- mains voltage (phase-to-phase and phase-to-neutral) AMF sets only
- mains frequency (each phase displayed separately) AMF sets only
- engine speed
- battery voltage
- engine hours run

The control module has indicators for:

- over speed / under speed
- emergency stop
- failure to start
- battery charger failure

Automatic shutdown occurs under:

- low engine oil pressure
- high engine temperature
- over speed / under speed
- failure to start after three attempts

MANUAL/REMOTE START SETS

These sets have the flexibility of either manual or remote automatic operation:

- manual operation is by START and STOP push-buttons on the control module
- remote operation is achieved by connecting a 2-wire circuit to the relevant terminals on the control module and is activated by setting the control module to AUTO

AUTOMATIC MAINS FAILURE SETS (AMF)

AMF control system integral with control cubicle

The AMF specification provides that in the event of a mains failure the generating set will automatically operate to supply the electrical load. In addition to the standard features automatic mains failure sets have the following features:

- mains monitoring unit to control set operation
- load-transfer contactors, mechanically and electrically interlocked (rated for set output)
- indicator for mains-on-load or plant-on-load
- control module timer circuits set to delay start, delay transfer back to mains and delay stop to allow for engine cool down
- solid state automatic battery charger that maintains charge when set is not running
- switch allowing manual operation of the load-transfer contactor if automatic system fails and set is started manually

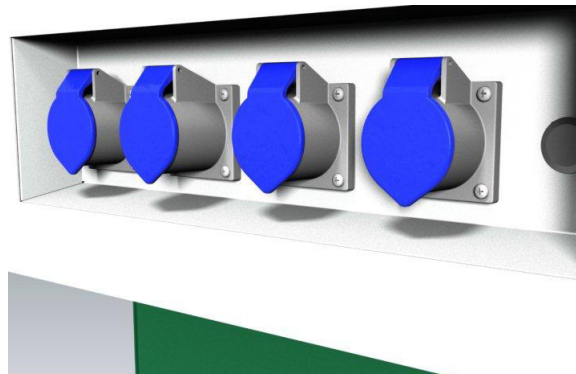
OPTIONAL ITEMS

- integral residential exhaust silencer as fitted to acoustic gensets (open sets only)
- remote residential exhaust silencer for plant room installations (open sets only)
- acoustic canopy kit (including residential silencer kit) for retro-fitting to open sets
- AMF system with remote mounted ATS panel
- sand filter unit, high efficiency, labyrinth type
- complete with washable dust element (LAT 8A, LAT 15A only)
- rodent mesh
- industrial electrical output sockets
- starting handle (not anti-kickback) – open sets only
- 2-wheel trailer
- basic tool kit

ACOUSTIC SET OPTIONS



Sand Filter Unit



Industrial Electrical Output Sockets



Rodent Mesh



Large service doors showing fold-down front panel on cubicle and external emergency stop button



Roof Mounted Lifting Eye Bolt Fixings

POWER OUTPUTS ³ TO ISO 8528-1 AND EMISSIONS COMPLIANCE

50 Hz 1500 r/min							60 Hz 1800 r/min									
Model	Engine	Rating	Single Phase		Three Phase		Model	Engine	Rating	Single Phase		Three Phase				
			220 V *	230 V *	240 V *	380/220 V *				400/230 V *	415/240 V *	220 or 110 V *	230 or 115 V *	240 or 120 V *	220/127 V *	230/133 V *
			kVA	kWe	kVA	kWe				kVA	kWe	kVA	kWe	kVA	kWe	
LAT 8(A)	TR1	PRP ¹	4.6	4.6	6.2	5.0	LAT 8(A)	TR1	PRP ¹	5.7	5.7	7.6	6.1			
		ESP ²	4.8	4.8	6.5	5.2			ESP ²	5.9	5.9	8.0	6.4			
LAT 15(A)	TR2	PRP ¹	8.9	8.9	12.5	10.0	LAT 15(A)	TR2	PRP ¹	9.5	9.5	15.1	12.1			
		ESP ²	9.4	9.4	13.1	10.5			ESP ²	9.9	9.9	15.8	12.6			
LAT 24(A) ⁵	TR3	PRP ¹	14.5	14.5	19.4	15.5	LAT 24(A) ⁵	TR3	PRP ¹	16.3	16.3	23.8	19.0			
		ESP ²	15.2	15.2	20.3	16.2			ESP ²	17.0	17.0	24.9	19.9			

SOUND PRESSURE ⁴

LATA (acoustic sets), 75% load at 7m

Genset	50 Hz, 1500 r/min	60 Hz, 1800 r/min
LAT 8A	64 dBA	65 dBA
LAT 15A	64 dBA	65 dBA
LAT 24A	64 dBA	65 dBA

4. LAT series gensets do not comply with noise directive 2000/14/EC.

APPROXIMATE FUEL CONSUMPTION

Values refer to litres/hour			50 Hz	60 Hz
Genset	Engine	Load	1500 r/min	1800 r/min
LAT 8(A)	TR1	100%	1.5	1.9
		75%	1.2	1.5
LAT 15(A)	TR2	100%	3.1	3.7
		75%	2.4	2.9
LAT 24(A)	TR3	100%	4.6	5.5
		75%	3.6	4.3

Key to Emissions Compliance

EU Stage 3A only	
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* Other voltages are available on request

3. Power outputs are based on new Lister Petter P type alternators. Mecc Alte alternators are available as an option, ratings may differ. Power Factor (pf). Single phase 1.0 pf; three phase 0.8 pf.

5. ESP ratings are not available for the LAT 24A (acoustic canopied) generating set, this set is limited to operating at a maximum of 40°C

RATINGS DEFINITIONS, TO ISO 8528-1

Standard Reference Conditions

A Lister Petter generating set is designed to operate in the following ISO 3046 environmental reference conditions

Barometric pressure	100 kPa
Relative humidity	30%
Ambient air temperature at the Inlet manifold	25°C

1. Prime Power (PRP)

This rating is for the supply of the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year.

The permissible average power output over 24 hours of operation shall not exceed 70 % of the PRP unless otherwise agreed by Lister Petter Limited.

2. Emergency Standby Power (ESP)

Emergency standby power is defined as the maximum power available during a variable electrical power sequence, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year.

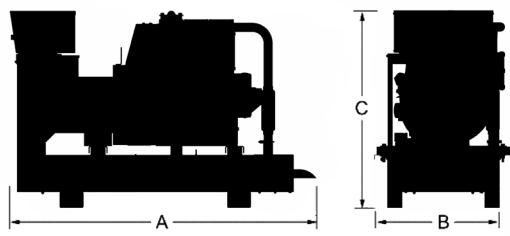
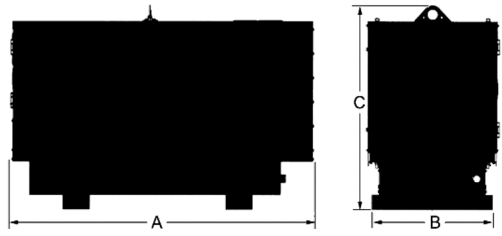
The permissible average power output over 24 hours of operation shall not exceed 70 % of the ESP unless otherwise agreed by Lister Petter Limited. The actual average power output shall be below or equal to the permissible average power output as defined for ESP.

The above ratings are subject to the following ISO 3046 standard operating conditions, the use of fuel to BS EN 590 Class A1 or A2, lubricating oils of the correct performance specification and viscosity classification and that the maintenance intervals and procedures are carried out as prescribed by Lister Petter Limited.

Derating

For non-standard site conditions, reference should be made to relevant BS, ISO & DIN standards.

APPROXIMATE DIMENSIONS AND WEIGHT

Open generating set model:		LAT 8	LAT 15	LAT 24	
Open Set: side elevation (left); end elevation (right) 	Length (A)	mm	1080	1190	1400
		in	42.5	47	55
	Width (B)	mm	698	698	698
		in	27.5	27.5	27.5
	Height (C)	mm	972	972	972
		in	38	38	38
	Dry weight	kg	358	428	518
		lb	789	944	1142
Acoustic generating set model:		LAT 8A (SF*)	LAT 15A (SF*)	LAT 24A**	
Acoustic Set: side elevation (left); end elevation (right) 	Length (A)	mm	1390 (1500)	1500 (1610)	1675
		in	54.7 (59.1)	59.1 (63.4)	65.9
	Width (B)	mm	705	705	705
		in	27.8	27.8	27.8
	Height (C)	mm	1070	1070	1070
		in	42.1	42.1	42.1
	Dry weight	kg	412 (422)	521 (531)	625 (635)
		lb	908 (930)	1149 (1171)	1378 (1400)

* Length and weight with sand filter fitted

** No sand filter option available on LAT 24A genset

A comprehensive range of options allows you to select a specification that matches your requirements. Please ask your Lister Petter distributor (see panel below right).

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