ALPHA Series
LLD Water-Cooled Gensets

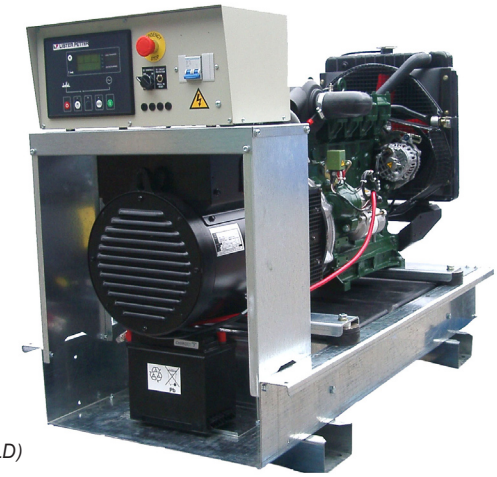
LLD 95(A), LLD 135, LLD 140(A), LLD 190(A), LLD 200, LLD 250(A), LLD 275, LLD 400

50 Hz; 1500/3000 r/min; power outputs: 5.6—43.5 kVA
60 Hz; 1800 r/min; power outputs: 6.9—25.3 kVA

Water-cooled generating sets with electronic control module

Choice of:

- ✓ 50 Hz, 1500/3000 r/min or 60 Hz, 1800 r/min
- ✓ Lister Petter ALPHA-Series water-cooled, direct injection diesel engine (2, 3 or 4 cylinders)
- ✓ naturally aspirated or turbocharged
- ✓ open set (LLD) or acoustic set (LLDA)



Open Set (LLD)

Standard Features

- control system with electronic digital control module (for features see page 3)
- single-bearing, 2 or 4-pole brushless alternator
- 66-litre polypropylene fuel tank with contents gauge
- galvanised steel base-plate with forklift pockets and bunding for the fuel tank
- anti-vibration mountings
- 12 V starter battery and leads
- mechanical governing
- emergency stop button (lock-down type)
- pusher fan
- Operators' Handbook
- electrical diagrams

Open Sets Only:

- engine-mounted exhaust silencer

Acoustic Sets Only:

- acoustic canopy
- residential exhaust silencer
- central point lifting eye
- external emergency stop button

Acoustic Set (LLDA)

Engine Accessories

- medium-duty air cleaner
- oil and fuel filters
- fuel-lift pump
- 12 V electric starting system

Alternator Specification

- single-bearing, 2 or 4-pole brushless alternator
- solid state AVR with ±1.5% as standard
- class H insulation on the rotor and stator, with ingress protection rating 23

Optional Items

- residential exhaust silencer for open sets (as fitted to acoustic)
- acoustic canopy kit (including residential silencer kit) for retro-fitting to electric-start open sets only
- 2-wheel trailer
- basic tool kit

Control Cubicle

All LLD and LLDA sets have a control cubicle mounted on a vibration-isolated support, which has the following features:

- electronic digital control module with monitoring/control facility and warning indicators
- automatic shutdown protection
- emergency stop button (lock-down type)
- 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)
- output frequency
- engine speed
- engine coolant temperature
- battery voltage
- engine hours run

The control module has indicators for:

- overspeed/underspeed
- emergency stop
- engine oil pressure
- engine temperature
- failure to start
- battery charger failure

Automatic shutdown occurs under:

- low engine oil pressure
- high engine temperature
- overspeed/underspeed
- 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)

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:

- wall-mounted cubicle governing automatic mains failure operation
- control module timer circuits set to delay start, delay transfer back to mains and delay stop to allow for engine cooldown
- solid-state automatic battery charger that maintains charge when set is not running

The wall-mounted cubicle 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

Power Outputs to ISO 8528-1[1] and Emissions Compliance

50 Hz, 1500 r/min [4]

Model	Engine	Rating	Single Phase 220V 230 V 240 V		Three Phase 380/220 V 400/230 V 415/240 V	
			kVA	kW	kVA	kW
LLD 95(A)	LPW2	Prime	5.6	5.6	7.0	5.6
		Standby	6.1	6.1	7.6	6.1
	LPWS2	Prime	5.6	5.6	7.0	5.6
		Standby	6.1	6.1	7.6	6.1
LLD 140(A)	LPW3	Prime	8.7	8.7	10.9	8.7
		Standby	9.5	9.5	12.0	9.6
	LPWS3	Prime	8.7	8.7	10.9	8.7
		Standby	9.5	9.5	12.0	9.6
LLD 190(A)	LPW4	Prime	12.2	12.2	15.0	12.0
		Standby	13.5	13.5	16.5	13.2
	LPWS4	Prime	12.2	12.2	15.0	12.0
		Standby	13.5	13.5	16.5	13.2
LLD 250(A)	LPWT4	Prime	16.1	16.1	20.0	16.0
		Standby	17.7	17.7	21.9	17.6
	LPWST4	Prime	16.1	16.1	20.0	16.0
		Standby	17.7	17.7	21.9	17.6

60 Hz, 1800 r/min [4]

Model	Engine	Rating	Single Phase 220 or 110 V 230 or 115 V 240 or 120 V		Three Phase 220/127 230/133	
			kVA	kW	kVA	kW
LLD 95(A)	LPW2	Prime	6.9	6.9	8.6	6.9
		Standby	7.5	7.5	9.5	7.6
	LPWS2	Prime	6.9	6.9	8.6	6.9
		Standby	7.5	7.5	9.5	7.6
LLD 140(A)	LPW3	Prime	10.5	10.5	13.3	10.6
		Standby	11.5	11.5	14.6	11.7
	LPWS3	Prime	10.5	10.5	13.3	10.6
		Standby	11.5	11.5	14.6	11.7
LLD 190(A)	LPW4	Prime	14.8	14.8	18.5	14.8
		Standby	16.3	16.3	20.3	16.2
	LPWS4	Prime	14.8	14.8	18.5	14.8
		Standby	16.3	16.3	20.3	16.2
LLD 250 (A)	LPWT4	Prime	19.3	19.3	24.4	19.5
		Standby	21.2	21.2	26.9	21.5
	LPWST4	Prime	19.3	19.3	24.4	19.5
		Standby	21.2	21.2	26.9	21.5

50 Hz, 3000 r/min [2]

Model	Engine	Rating	Single Phase 220V 230 V 240 V		Three Phase 380/220 V 400/230 V 415/240 V	
			kVA	kW	kVA	kW
LLD 135	LPW2	Prime	10.2	10.2	13.7	11.0
		Standby	11.2	11.2	15.1	12.1
	LPWS2	Prime	10.2	10.2	13.7	11.0
		Standby	11.2	11.2	15.1	12.1
LLD 200	LPW3	Prime	15.4	15.4	20.3	16.3
		Standby	16.9	16.9	22.4	17.9
	LPWS3	Prime	15.4	15.4	20.3	16.3
		Standby	16.9	16.9	22.4	17.9
LLD 275	LPW4	Prime	20.9	20.9	28.1	22.5
		Standby	23.0	23.0	30.9	24.8
	LPWS4	Prime	20.9	20.9	28.1	22.5
		Standby	23.0	23.0	30.9	24.8
LLD 400	LPWT4	Prime			39.5	31.6
		Standby			43.5	34.8

1. For rating definitions see page 4. Power Factor: single phase, 1.0 pf; three phase, 0.8 pf. Other voltages are available on request. Power outputs are based on standard Lister Petter alternators (but see 2).
2. 50 Hz, 3000 r/min outputs are based on Mecc Alte Alternators.
3. In accordance with European Noise Directive 2001/14/EC.

Sound Pressure[3]

Acoustic sets, 75% load at 7m

50 Hz, 1500 r/min

LPW2/3	LPW4	LPWT4	LPWS2/3	LPWS4	LPWST4
64 dBA	65 dBA	62 dBA	64 dBA	65 dBA	63 dBA

4. Mecc Alte Alternators are available as an option, ratings are different

Approximate Fuel Consumption

Values refer to litres/hour			50 Hz		60 Hz
Genset	Engine	Load	1500 r/min	3000 r/min	1800 r/min
LLD 95(A)	LPW2	100%	1.9		2.3
		75%	1.5		1.8
	LPWS2	100%	2.1		2.5
		75%	1.6		2.0
LLD 135	LPW2	100%		3.9	
		75%		3.1	
	LPWS2	100%		4.4	
		75%		3.4	
LLD 140(A)	LPW3	100%	2.8		3.4
		75%	2.2		2.7
	LPWS3	100%	3.1		3.7
		75%	2.4		2.9
LLD 200	LPW3	100%		5.9	
		75%		4.6	
	LPWS3	100%		6.6	
		75%		5.1	
LLD 190(A)	LPW4	100%	3.8		4.6
		75%	2.9		3.6
	LPWS4	100%	4.1		5.0
		75%	3.2		3.9
LLD 275	LPW4	100%		7.8	
		75%		4.6	
	LPWS4	100%		8.8	
		75%		6.9	
LLD 250(A)	LPWT4	100%	4.9		6.0
		75%	3.7		4.6
	LPWST4	100%	5.4		6.6
		75%	4.1		5.1
LLD 400	LPWT4	100%		10.6	
		75%		8.3	
	LPWST4	100%			
		75%			

N/D = No data available at going to press. Please ask your distributor.

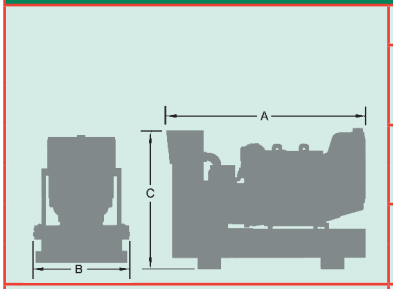
Key to Colour Coding

page 3

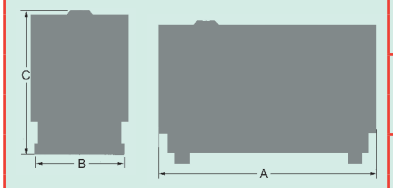
- Fully compliant with EU Stage 3A, USA EPA Interim Tier 4 and India GSR 448(E) legislation.
- Compliant with EU Stage 3A and India GSR 448(E) legislation.
- Compliant with USA EPA Interim Tier 4 legislation only.
- Compliant with EU Stage 3A legislation only.

ALPHA Series: LLD Water-Cooled Genset Technical Data Sheet

Approximate Dimensions



		Open sets
Length (A)	mm	1442
	in	56.8
Width (B)	mm	715
	in	28.1
Height (C)	mm	997
	in	39.25



		Acoustic sets	LLD 250A (LPWST4)
Length (A)	mm	1693	1945
	in	66.6	76.6
Width (B)	mm	743	841
	in	29.2	33.1
Height (C)	mm	1143	1227
	in	45.0	48.3

Rating Definitions to ISO 8528-1

Ratings are in accordance with ISO 8528-1. Power Factor: Single phase, 1.0 pf; three-phase, 0.8 pf. Other voltages are available on request.

Rating Conditions

A standard generating set is designed to operate in environmental reference conditions of 25°C, 100 kPa and 30% humidity.

Prime Power

This rating is for the supply of continuous electrical power (at variable load). There is no limit on the annual hours of operation and 10% overload power can be supplied for 1 hour in 12.

Standby Power

This rating is for the supply of continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted.

Weight

		Open Sets								Acoustic Sets				
		LLD 95	LLD 135	LLD 140	LLD 190	LLD 200	LLD 250	LLD 275	LLD 400	LLD 95A	LLD 140A	LLD 190A	LLD 250A (LPWT4)	LLD 250A (LPWST4)
Dry weight	kg	396	396	417	456	417	466	456	466	500	540	580	590	720
	lb	873	873	919	1005	919	1027	1005	1027	1102	1190	1279	1301	1584

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

Distributor's Address

Lister Petter have made efforts to ensure that the information in this data sheet is accurate but reserve the right to amend specifications and information without notice and without obligation or liability.

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