



# OMEGA Series LLO Water-Cooled Gensets

**LLO 100(A), LLO 200(A)**

50 Hz; 1500 r/min; power outputs: 100–248 kVA

60 Hz; 1800 r/min; power outputs: 166–282 kVA

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## Water-cooled generating sets with electronic control module

### Choice of:

- ✓ 50 Hz, 1500 r/min or 60 Hz, 1800 r/min
- ✓ Lister Petter OMEGA-Series water-cooled, direct injection, turbocharger (Omega 100) or turbocharged & intercooled (Omega 200) engine
- ✓ open set (LLO) or acoustic set (LLOA)
- ✓ manual/remote start and automatic mains failure operating modes
- ✓ Lister Petter or Stamford alternator



Acoustic Set (LLOA)

**Please note:** This photograph is for illustrative purposes only. Actual product received may change depending on the agreed specification.

### Standard Features

- Continuous operation in ambient temperatures up to 50°C (122°F) for open sets, up to 43°C (109°F) for acoustic sets
- control system with electronic digital control module (for features see page 2)
- 400-litre fuel tank with contents gauge
- galvanised steel base-plate with forklift pockets and lifting eyes
- anti-vibration mountings
- 24 V starter battery and leads
- electronic governing
- emergency stop button (lock-down type)
- pusher fan
- Operators' Handbook
- electrical diagrams

### Open Sets Only:

- remote mounting silencer kit (silencer & flexible bellows)

### Acoustic Sets (50Hz Only):

- acoustic canopy
- residential exhaust silencer
- external emergency stop button

## OMEGA Series: LLO Water-Cooled Genset Technical Data Sheet

### Engine Features

- 24 V electric starting
- 35 Amp battery-charging alternator
- twin oil and fuel filters
- heavy-duty air cleaner
- fuel solenoid, energised to run

### Alternator Specification

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

### Optional Items

- Battery charger unit for electric start sets (standard as part of AMF mode)
- Engine mounted silencer for open gensets
- acoustic canopy kit (including residential silencer kit) for retro-fitting to electric-start open sets only

### Control Cubicle

- 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
- low engine oil pressure
- high 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

## OMEGA Series: LLO Water-Cooled Genset Technical Data Sheet

Power Outputs to ISO 8528-1						
Genset Model	Engine Range	Rating	50 Hz, 1500 r/min		60 Hz, 1800 r/min	
			Three Phase		Three Phase	
			380/220 V 400/230 V 415/240 V		220/127 V 230/133 V	
			kVA	kWe	kVA	kWe
LLO 100/100(A)	OWT6	Prime	100	80	-	-
		Standby	110	88	-	-
LLO 100/125(A)	OWT6	Prime	125	100	-	-
		Standby	138	110	-	-
LLO 100/150(A)	OWT6	Prime	150	120	-	-
		Standby	165	132	-	-
LLO 100/166	OWT6	Prime	-	-	166	133
		Standby	-	-	183	146
LLO 200/175(A)	OWTA6	Prime	175	140	-	-
		Standby	193	154	-	-
LLO 200/200(A)	OWTA6	Prime	200	160	-	-
		Standby	220	176	-	-
LLO 200/225(A)	OWTA6	Prime	225	180	-	-
		Standby	248	198	-	-
LLO 200/256	OWTA6	Prime	-	-	256	205
		Standby	-	-	282	226

**Please note:** Ratings will vary slightly depending on alternator model choice and requested voltage output.

Sound Pressure			
Acoustic sets, 75% load at 7m		50 Hz	60 Hz
Genset Model	Engine Range	1500 r/min	1800 r/min
LLO 100/100A	OWT6	69.1	n/a
LLO 100/125A			
LLO 100/150A			
LLO 200/175A	OWTA6	69.1	n/a
LLO 200/200A			
LLO 200/225A			

Approximate Fuel Consumption				
Values refer to litres/hour			50 Hz	60 Hz
Genset	Engine	Load	1500 r/min	1800 r/min
LLO 100/100(A)	OWT6	100%	24.4	n/a
		75%	19.1	
LLO 100/125(A)	OWT6	100%	29.7	n/a
		75%	23.1	
LLO 100/150(A)	OWT6	100%	35.1	n/a
		75%	27.3	
LLO 100/166	OWT6	100%	n/a	41.0
		75%		31.7
LLO 200/175(A)	OWTA6	100%	38.6	n/a
		75%	29.5	
LLO 200/200(A)	OWTA6	100%	43.6	n/a
		75%	33.3	
LLO 200/225(A)	OWTA6	100%	47.2	n/a
		75%	36.1	
LLO 200/256	OWTA6	100%	n/a	58.4
		75%		45.1

### 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 may be 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.

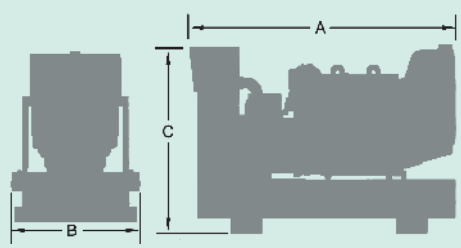
### Prime Power

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.

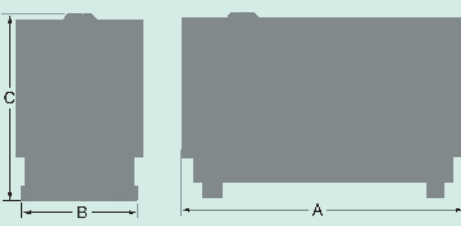
### Standby Power

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.

## OMEGA Series: LLO Water-Cooled Genset Technical Data Sheet

Approximate Dimensions				
	Open sets		LLO 100	LLO 200
	Length (A)	mm		3783
in			148.9	148.9
Width (B)	mm		1094	1094
	in		43.1	43.1
Height (C)	mm		1710	1710
	in		67.3	67.3
Dry Weight	kg		2381	2734
	lb		5249	6027

**Please note:** Height does not include silencer arrangement

	Acoustic sets*		LLO 100	LLO 200
	Length (A)	mm		4247
in			167.2	167.2
Width (B)	mm		1100	1100
	in		43.3	43.3
Height (C)	mm		2195	2195
	in		86.4	86.4
Dry Weight	kg		3128	3481
	lb		6896	7674

\* Acoustic sets available for 50 Hz only.

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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