

HSR LONG RUN GENSETS

HSR 15, HSR 15A, HSR 24, HSR 24A

50 Hz; 1500 r/min; power outputs: 8.6 — 19.9 kVA

60 Hz; 1800 r/min; power outputs: 9.5 — 24.2 kVA

AIR COOLED GENSETS FOR UP TO 2000 HOURS UNATTENDED RUNNING

CHOICE OF:

- 50Hz, 1500 r/min or 60Hz, 1800 r/min
- Lister Petter T Series air cooled, direct injection, naturally aspirated diesel engine (two or three cylinders)
- open set (HSR)
- acoustic Set (HSRA)

STANDARD FEATURES

- Lister Petter T Series engine as above
- control system with electronic digital control module
- single bearing, 4 pole brushless alternator
- 55 litre steel lube oil tank with inspection cover
- galvanised steel base-plate with forklift pockets and bunding for the oil tank
- anti vibration mountings
- 12 V starter battery and leads
- mechanical governing
- emergency stop button (lock-down type)
- flywheel-mounted cooling fan
- operators' Handbook
- electrical diagrams
- heavy duty bypass filter
- exhaust silencer
- increased service intervals (up to 2000 hrs)

OPEN SETS ONLY

- engine mounted exhaust silencer

ACOUSTIC SETS ONLY

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



OPEN SET (HSR)



ACOUSTIC SET (HSRA)

OPTIONAL ITEMS

- residential exhaust silencer for open sets
- AMF upgrade kit
- basic tool kit

ENGINE SPECIFICATION

- Lister Petter T Series, air cooled, direct injection, naturally aspirated diesel engine
- heavy duty air cleaner
- heavy duty oil and fuel filters
- fuel lift pump
- 12 V electric starting system

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 SYSTEM FEATURES

CONTROL CUBICLE

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

- 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
- automatic solid-state 4-Amp battery charger
- electronic digital control module with monitoring/control facility and warning indicators

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
- battery voltage
- 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)

The AMF specification provides that in the event of a mains failure the generating set will automatically operate to supply the electrical load.

Automatic mains failure sets have the following additional features:

- 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
- switch allowing manual operation of the load-transfer contactor if automatic system fails and set is started manually

| AIR COOLED GENSET POWER OUTPUTS ² | | | | | | | | | | |
|--|--------|---------|------------------------|------|-------------------------------------|------|--|------|------------------------|------|
| 50 Hz, 1500 r/min | | | | | 60 Hz, 1800 r/min | | | | | |
| | | | Single Phase | | Three Phase | | Single Phase | | Three Phase | |
| | | | 220V 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 | |
| Model | Engine | Rating | kVA | kW | kVA | kW | kVA | kW | kVA | kW |
| HSR15 | TR2 | Prime | 8.6 | 8.6 | 11.2 | 9.0 | 9.5 | 9.5 | 13.6 | 10.9 |
| | | Standby | 9.4 | 9.4 | 12.3 | 9.9 | 10.5 | 10.5 | 15.0 | 12.0 |
| HSR24 ³ | TR3 | Prime | 14.0 | 14.0 | 18.1 | 14.5 | 17.3 | 17.3 | 22.0 | 17.6 |
| | | Standby | 15.4 | 15.4 | 19.9 | 15.9 | 19.0 | 19.0 | 24.2 | 19.4 |

| ACOUSTIC SET SOUND PRESSURE LEVELS ¹ | | |
|---|-------------------|-------------------|
| Genset | dBA, at 75% load | |
| | 50 Hz, 1500 r/min | 60 Hz, 1800 r/min |
| HSR 15A | 66 TBC | 67 TBC |
| HSR 24A ³ | 66 TBC | 67 TBC |

1. Noise levels are in accordance with European Noise Directive 2001/14/EC.

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

3. Standby ratings are not available for the HSR 24A (acoustic canopied) generating set, it is also limited to operating at a maximum of 40°C.

| APPROXIMATE FUEL CONSUMPTION | | | |
|------------------------------|------|----------------------|----------------------|
| | | litres/hour | |
| | | 50 Hz, 1500 r/min | 60 Hz, 1800 r/min |
| Genset | Load | | |
| | | | |
| HSR 15 | 100% | 3.1 | 3.7 |
| | 75% | 2.4 | 2.9 |
| HSR 24 ³ | 100% | 4.6 | 5.5 |
| | 75% | 3.6 | 4.3 |

RATING DEFINITIONS TO ISO 8528-1

All ratings in the table are in accordance with ISO 8528-1. Power Factor: Single phase, 1.0 pf; three-phase, 0.8 pf. Voltages: Other voltages are available; refer to Lister Petter.

Power outputs are based on the optimum make of alternator for the set. Gensets fitted with other manufacturers' alternators may not achieve the above ratings.

Rating Conditions

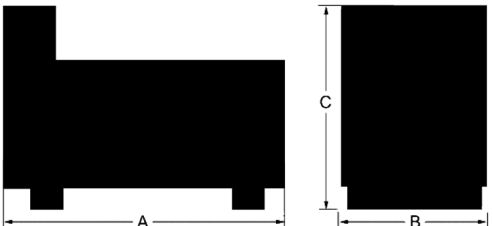
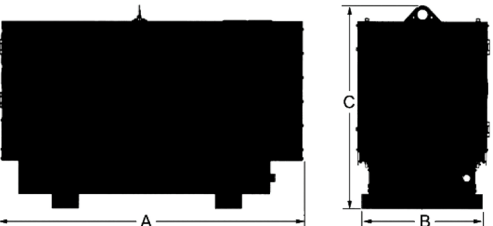
A standard generating set is designed to operate in environmental reference conditions of 25 °C, 100 kPa and 30% humidity.

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.

| APPROXIMATE DIMENSIONS AND WEIGHT | | | | |
|--|------------|----|---------|---------|
| Open generating set model: | | | HSR 15 | HSR 24 |
| Open Set: side elevation (left); end elevation (right)  | Dry weight | kg | 450.2 | 553.7 |
| | | lb | 992.5 | 1220.7 |
| | Length (A) | mm | 1626.2 | |
| | | in | 64 | |
| | Width (B) | mm | 837.4 | |
| | | in | 33 | |
| | Height (C) | mm | 1229.7 | |
| | | in | 48.4 | |
| Acoustic generating set model: | | | HSR 15A | HSR 24A |
| Acoustic Set: side elevation (left); end elevation (right)  | Dry weight | kg | 665.5 | 769 |
| | | lb | 1467.2 | 1695.4 |
| | Length (A) | mm | 1946.8 | |
| | | in | 76.6 | |
| | Width (B) | mm | 873 | |
| | | in | 34.4 | |
| | Height (C) | mm | 1360 | |
| | | in | 53.5 | |

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).

UK

LISTER PETTER LIMITED
 Long Street, Dursley, Gloucestershire, GL11 4HS, England
 TEL: +44 (0)1453 544141; FAX: +44 (0)1453 546732
 E-mail: sales@lister-petter.co.uk
 www.lister-petter.co.uk

UAE

LISTER PETTER FZE
 Dubai Silicon Oasis Headquarters,
 PO Box 341077, Dubai, UAE
 TEL: +971 4 372 4331; FAX: +971 4 372 4318
 E-mail: sales@listerpettergroup.com
 www.lister-petter.co.uk

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