

kirloskar
powergen

60Hz

GENSET SERIES

MODELS

1111WS60

1111W60



**BETTER POWER
FOR A**

limitless

T O M O R R O W

MODELS:

1111WS60

Type: SAE

1111W60

Type: Open



ENGINE:

KIRLOSKAR DV16 ETA G1
LIQUID COOLED



ALTERNATOR:

LEROY SOMER LSA 49.1 L 10
BRUSHLESS



CONTROLLER:

DEESEA DSE7320 MKII
MICROPROCESSOR BASED



Power Factor: 0.8 [Lag]



Line Voltage: 380V



Phase Voltage: 127V / 220V



Fuel Tank Capacity:

1111WS60: 900L

1111W60: 410L



Sound Level at 7m at 75%
load as per ISO8528-10:

1111WS60: 80 dB(A)

Standby Power (ESP) kVA / kWe: 1111 / 888.8

Prime Power (PRP) kVA / kWe: 1010 / 808

Phase / Volts: 3 Phase / 380V

SAE: Sound Attenuated Enclosure, Ratings are as per ISO 8528-1; refer page 6 for definitions

¹+5% tolerance is applicable as per ISO 3046. Fuel consumption based on diesel fuel with
a specific gravity of 0.85 and conforming to BS 2869, Class A2.

Fuel Consumption % of PRP¹

L/hr

50% Load

121

75% Load

165

100% Load

218

BUILT FOR EFFICIENCY. ENGINEERED FOR POWER.



High Performance & Reliability



Low Fuel Consumption



Easy Installation



Low Maintenance Cost



Service Support in all Countries of Operation



Extended Service Intervals

PERFORMANCE ASSURANCE

- **Total Quality Management System**
- **Engines & Generating set fully manufactured by us in facilities certified to ISO 9001, ISO 14001 and OHSAS 18001**
- **Generating set complies to ISO 8528**
- **Engines comply to ISO 3046 and AC Generators comply to BS5000, IEC34**

STANDARD AND OPTIONAL FEATURES

- **Generating Set**
(*Applicable only for SAE type)

- Ladder on enclosure*
 - Fuel pipe extension*
 - External Fuel Filling Access*
 - Door for Radiator Access*

- Stainless steel door hinges*
 - Coolant Drain Arrangement
 - Mesh on Exhaust Tail Pipe
 - Longer Fuel Tank Breather Tube

- Control Panel Door Stopper*
 - Fuel Priming Manual Pump
 - External Standalone Fuel Tank
 - Fuel Transfer Pump
- **Engine**

- SMF Battery
 - Guard for Rotating Part
 - Electronic governor

- Water Separator
 - Over-Cranking Protection
 - Water in fuel sensor

- Jacket Water Heater
 - Lube oil drain pump (loose)
 - Dual (Electrical + Mechanical) Fuel Gauge
- **Alternator**

- Digital AVR
 - Droop current transformer
 - AREP excitation

- Remote Voltage Adjustment Potentiometer
 - Alternator Inlet Louver Filter
 - Alternator Space Heater
- **Controls**

- Automatic Starting and AMF Facility
 - 4 Pole Circuit Breaker
 - ATS Panel

- Communication Port RS485/RS232
 - Kirloskar Remote Monitoring KRM Unit
 - 24V DC Hooter

- 3 Pole 1600A MCCB
 - Static Battery Charger
 - Synchronization panels
- Standard Feature

○ Optional Feature



ENGINE SPECIFICATIONS 1111WS60 / 1111W60

PHYSICAL DATA



Engine RPM	1800
Configuration	V
Cylinders	16
Type	Four Stroke
Bore x Stroke (mm)	130 x 150
Displacement (L)	31.88
Cooling	Liquid Cooled
Aspiration	Turbo Charged After Cooled
Compression Ratio	16.5 : 1
Piston Speed (m/s)	9.0
HP Prime @ 1800 RPM	1210
HP Standby @ 1800 RPM	1331

AIR SYSTEM



Air Filter Type	Dry Replaceable
Air Volume Required for Combustion (m ³ /hr)	4560
Air Volume Required for Cooling (m ³ /hr)	83700
Air Volume Required by Alternator (m ³ /hr)	3720
Total Fresh Air Required (m ³ /hr)	91980

COOLING SYSTEM



Cooling system capacity (L)	180
Coolant Type	Ethylene glycol based premixed with water in ratio 50:50, anti freeze & anti corrosion type
Radiator Fan Load (hp)	42

ELECTRICAL SYSTEM



Starting Arrangement	24V Electric
Starter Battery Rating	4 x 200Ah
Battery Charging Alternator	----
Battery Charging Alternator	----
Battery Charger ²	24V 10A/15A with Float and Boost Mode

LUBRICATION SYSTEM



Type of Lube Oil Filter	Full Flow Spin On Type
Oil to be used	SAE 15W40 API: CI4
Oil Pump Type	Through G-Rotor Gear Pump
Lube Oil Sump Capacity (L) Refill / First Fill	125 / 130
Lube Oil Consumption	0.15% of Fuel Consumption

FUEL SYSTEM



Type of Fuel Filter	Two Stage Spin on Type
Governor Type	Electronic
Class of Governing	ISO 8528-5, Class G2
Recommended Fuel	Class A2, High Speed Diesel

EXHAUST SYSTEM



Exhaust Gas Flow Rate (kg/hr)	4820
Maximum Exhaust Gas Temperature (°C)	550
Maximum Allowed Back Pressure (mm of Hg)	80
Flange Details for Exhaust Piping Extension (mm)	PCD 260 +/-0.5, 8 Holes 20.0 +/-0.5

² Optional Extra Accessory



ALTERNATOR SPECIFICATIONS 1111WS60 / 1111W60

ALTERNATOR PHYSICAL DATA



Continuous Rating	Insulation Class	H
	kVA at 0.8 PF	1010
	Temp Rise (°C)	125 / 40°C
Number of Bearings		1
Pole		4
Leads		6
Winding Pitch		2 / 3
Ingress Protection Rating		IP23
Voltage Regulator		D350
Recommended Earthing Type		Solid, separate for neutral and body

ALTERNATOR OPERATING DATA



Over Speed (RPM)	2250
Excitation	Self-excited (Brushless)
Cooling Method	Forced through shaft mounted blower fan
THD at full linear balanced load AC waveform	Less than 5%
Voltage Regulation (%)	± 1.0
Voltage	380V
Efficiency at full load (%)	95.1
Reactance per unit (Xd)	2.777
Reactance per unit (X'd)	0.154
Reactance per unit (X''d)	0.123



CONTROL SYSTEMS FEATURES AND SAFETIES

ON SCREEN DISPLAY

Generator Volts, Amps. Hz	Y
Generator kW, kVA, kVAr	Y
Generator per phase PF	Y
Generator kWhr meter	Y
Earth current (A)	Y
Grid (Mains) Voltage (L-L)	Y
Battery Voltage (V)	Y
Engine start attempts	Y
Engine Temperature (oC)	Y
Engine speed (RPM)	Y
Engine Run Hours (Hours & Min.)	Y
Lube oil Pressure (kPa, PSI, bar)	Y
Fuel level (%)	Y

PROTECTIONS

Low oil pressure	N
High coolant temperature	Y
Low fuel level	Y
Low coolant level	N
Under & over speed	Y
Low & high battery Voltage	Y
Low charge alternator	Y
Emergency stop	N
Fail to start & fail to stop warning	Y
Auto remote start/stop Di	.....
Under & over voltage	Y
Under & over frequency	Y
Over kW or Overcurrent	N
Earth fault	N
Reverse power	N
Phase unbalance	N

WARNING

SHUTDOWN

INDICATION

DIGITAL INPUT

Y	Y	Y	.....
Y	Y	Y	.....
Y	Y	Y	.....
Y	Y	Y	.....
Y	Y	Y	.....
N	Y	Y	.....
Y	N	Y	.....
Y	N	Y	.....
N	Y	Y	.....
Y	N	Y	.....
.....	.....	.....	Y
Y	Y	Y	.....
Y	Y	Y	.....
N	Y	Y	.....
N	Y	Y	.....
N	Y	Y	.....

COMMUNICATION PORTS

RS485	Y
RS232	Y

Y - Available

N - Not Available

..... Not Applicable

DOCUMENTS AND QUALITY STANDARDS

Documents

Generating set user manual, engine operation and maintenance manual – in soft form

Quality Standards

ISO 8528, ISO 3046, IS 10002, BS5514, DIN 6271, ISO 9001, ISO 14001

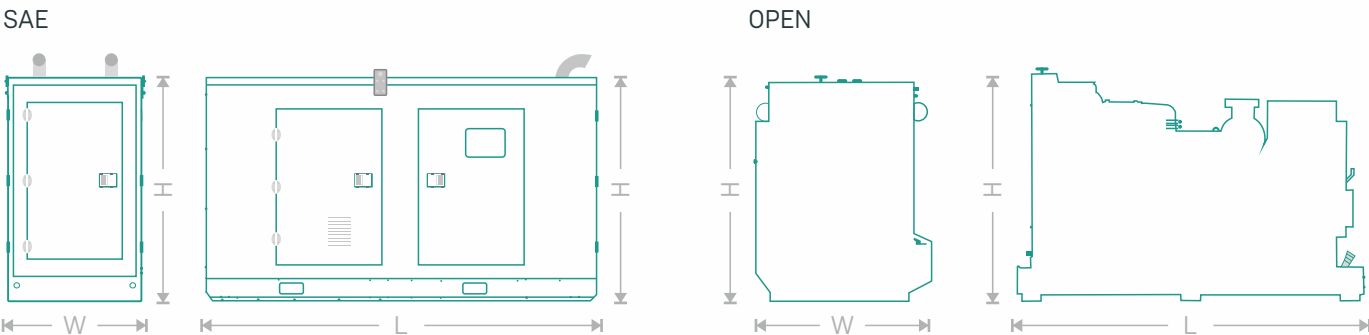
WEIGHT AND DIMENSIONS

1111WS60

Type:	Overall Dimension ³ (LxWxH) cms:	Weight ⁴ with Oil and Coolant (kg):
SAE	687 x 235 x 250	13200

1111W60

Type:	Overall Dimension ³ (LxWxH) cms:	Weight ⁴ with Oil and Coolant (kg):
Open	455 x 210 x 251	8650



³Dimensions are for logistics purpose only. Please refer installation / GA drawing for installation.

⁴Weight mentioned is for indicative only. Actual weight may vary based on configuration.

Generating set ratings definitions as per ISO8528: (De-rating is applicable for climatic conditions other than standard reference conditions of ISO8528-1)

Standby Rating / Emergency Standby power / ESP: These ratings are applicable for supplying electrical power at variable load in the event of a utility power failure. The standby power is maximum power available with no overload permitted on these ratings. The permissible average power output over 24 hours of operation shall not exceed 70% of the ESP. The alternator on this model is peak continuous rated (as defined in ISO 8528-3)

Prime Rating / PRP: These ratings are applicable for supplying continuous electrical power at variable load in lieu of commercial purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours. The permissible average power output over 24 hours of operation shall not exceed 70% of the PRP.

Continuous Rating / COP: These ratings are applicable for supplying power continuously to a constant load up to the maximum output rating for unlimited hours. No sustained overload capability is available for this rating.



A RICH HERITAGE OF OVER A CENTURY OF ENGINEERING EXCELLENCE.

Kirloskar power generating sets prioritize user experience, delivering exceptional features and benefits. Streamlined installation and enhanced dependability to expedited service, reduced maintenance costs, and optimized performance.

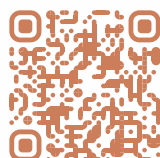
Kirloskar Powergen sets itself apart with groundbreaking engineering that establishes new industry benchmarks.

limitless **POTENTIAL, SUSTAINABLE PRACTICES**

Our state-of-the-art manufacturing facility embodies our commitment to sustainable practices. We partner with nature to power the facility itself, transforming waste into valuable resources. This focus on sustainability inspires both our workforce and surrounding communities.

It's here, where cutting-edge technology meets exceptional skills,
that we engineer solutions to empower limitless possibilities.

Discover our Plant with a
QR Code Scan.





SHAPING THE FUTURE.
DELIVERING POWER GLOBALLY.

INGENIOUS DESIGN.
UNMATCHED PERFORMANCE.

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T O M O R R O W

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