kirloskar powergen

60Hz

GENSET SERIES

MODELS

352WS60

352W60

BETTER POWER
FOR A

limitless

TOMORROW

MODELS:

352WS60
Type: SAE

352W60
Type: Open

ENGINE:
KIRLOSKAR DV8
LIQUID COOLED

ALTERNATOR:
STAMFORD HCI444E1
BRUSHLESS

CONTROLLER:
DEEPSEA DSE7320 MKII
MICROPROCESSOR BASED

- Power Factor: 0.8 [Lag]
- Line Voltage: 220V / 380V
- Phase Voltage: 127V / 220V
- Fuel Tank Capacity:
  352WS60: 560L
  352W60: 552L
- Sound Level at 7m at 75% load as per ISO8528-10:
  352WS60: 70 dB(A)

Standby Power (ESP) kVA / kWe: 352 / 281.6
Prime Power (PRP) kVA / kWe: 320 / 256
Phase / Volts: 3 Phase / 220V / 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 confirming to BS 2869, Class A2.

Fuel Consumption % of PRP[1]	L/hr
50% Load	41.5
75% Load	56.0
100% Load	72.0

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)

● Top Lifting Arrangement*	● Door for Radiator Access*	● Stainless steel door hinges*
● Silencer Mounted Inside Canopy*	● Coolant Drain Arrangement	● Control Panel Door Stopper*
● External Fuel Filling Access*	● Mesh on Exhaust Tail Pipe	○ Fuel Priming Manual Pump
● Longer Fuel Tank Breather Tube	○ Fuel Transfer Pump	○ External Standalone Fuel Tank

Engine

● SMF Battery	● Water Separator	● Dual (Electrical + Mechanical) Fuel Gauge
● Lube Oil Drain Pump	● Over-Cranking Protection	
● Guard for Rotating Part	● Electronic Governer	○ Jacket Water Heater

Alternator

○ Alternator Space Heater	○ Droop Current Transformer	○ Remote Voltage Adjustment Potentiometer
○ PMG	○ Alternator Inlet Louver Filter	

Controls

● Automatic Starting and AMF Facility	● Communication Port RS485/RS232	○ Static Battery Charger
○ 4 Pole Circuit Breaker	○ Kirloskar Remote Monitoring Unit	● 3 Pole 630A MCCB
○ ATS Panel	○ 24V DC Hooter	○ Synchronization Panels

● Standard Feature
○ Optional Feature

ENGINE SPECIFICATIONS 352WS60 / 352W60

PHYSICAL DATA

Engine RPM	1800
Configuration	V
Cylinders	8
Type	Four Stroke
Bore x Stroke (mm)	130 x 150
Displacement (L)	15.91
Cooling	Liquid Cooled
Aspiration	Turbo Charged After Cooled
Compression Ratio	16.5 : 1
Piston Speed (m/s)	9.0
HP Prime @ 1800 RPM	400
HP Standby @ 1800 RPM	440

AIR SYSTEM

Air Filter Type	Dry Replaceable
Air Volume Required for Combustion (m^3/hr)	1980
Air Volume Required for Cooling (m^3/hr)	36000
Air Volume Required by Alternator (m^3/hr)	2880
Total Fresh Air Required (m^3/hr)	40860

COOLING SYSTEM

Cooling system capacity (L)	123
Coolant Type	Ethylene glycol based premixed with water in ratio 50:50, anti freeze & anti corrosion type
Radiator Fan Load (hp)	13.5

ELECTRICAL SYSTEM

Starting Arrangement	24V Electric
Starter Battery Rating	2 x 200Ah
Battery Charging Alternator	Engine Mounted 24V
Battery Charging Alternator	45A
Battery Charger[2]	24V 5A/10A 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	38 / 41
Lube Oil Consumption	0.3% 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)	1696
Maximum Exhaust Gas Temperature (°C)	550
Maximum Allowed Back Pressure (mm of Hg)	50
Flange Details for Exhaust Piping Extension (mm)	PCD 280 +/-0.5, 8 Holes 22.0 +/-0.5

[2] Optional Extra Accessory

ALTERNATOR SPECIFICATIONS 352WS60 / 352W60

ALTERNATOR PHYSICAL DATA

Continuous Rating	Insulation Class	H
	kVA at 0.8 PF	320
	Temp Rise (°C)	125 / 40°C
Number of Bearings		1
Pole		4
Leads		6
Winding Pitch		2 / 3
Ingress Protection Rating		IP23
Voltage Regulator		AS440
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	220V	380V
Efficiency at full load (%)	93.5	93.4
Reactance per unit (Xd)	3.26	3.47
Reactance per unit (X'd)	0.20	0.21
Reactance per unit (X"d)	0.14	0.15

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

COMMUNICATION PORTS

RS485	Y
RS232	Y

PROTECTIONS

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

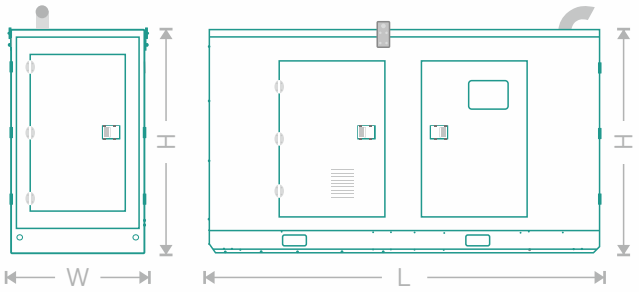
352WS60

Type:	Overall Dimension[3] (LxWxH) cms:	Weight[4] with Oil and Coolant (kg):
SAE	498 x 211 x 228	6000

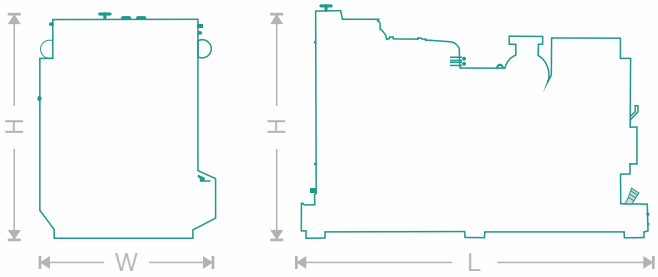
352W60

Type:	Overall Dimension[3] (LxWxH) cms:	Weight[4]4 with Oil and Coolant (kg):
Open	339 x 166 x 220	4250

SAE



OPEN



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

[4]Weight 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.

kirloskar
powergen

SHAPING THE FUTURE.

DELIVERING POWER GLOBALLY.

INGENIOUS DESIGN.

UNMATCHED PERFORMANCE.

KIRLOSKAR OIL ENGINES LIMITED
A Kirloskar Group Company

Regd. Office: 13, Laxmanrao Kirloskar Road,
Khadki, Pune, Maharashtra 411 003
INDIA

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Tel: +91 (20) 2581 0341
Fax: +91 (20) 2581 3208, 2581 0209
Helpline: +91 8806 33 44 33
koel.helpdesk@kirloskar.com

IBG.X.53.REV0