

DIESEL GENERATOR SET - MAKAWA POWER



WATER-COOLED



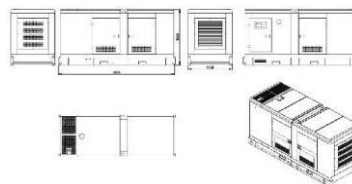
1 phase, 2 wires



50HZ



DIESEL FUEL



STANDARD SPECIFICATIONS

1. ENGINE
FOUR STROKE HEAVY DUTY HIGH PERFORMANCE INDUSTRIAL DIESEL ENGINE.
2. ENGINE FILTRATION SYSTEM
 - AIR FILTER
 - FUEL FILTER
 - FULL FLOW LUBO OIL FILTER
 ALL FILTERS HAS REPLACEABLE ELEMENTS
3. COOLING SYSTEM
Cooled by water (mixed with antifreeze solution) combined with axial fan
4. Operating and operating conditions
Ambient temperature: - 25°c to +52°c
Operating humidity: 5% to 95%
Suitable for environmental conditions in Vietnam
5. EXHAUST SYSTEM
HEAVY DUTY INDUSTRIAL EXHAUST SILENCER
6. CIRCUIT BREAKER TYPE
DELIXI MCCB LS

GENERATING SET MODEL	MKW8.5YD	
OUTPUT RATING 220V,1PH, 50HZ,1500RPM	PRIME	STANDBY
	8,5KVA	10KVA
	8,5KW	10KW

ALTERNATOR DATA	
MAKE	MAKAWA
MODEL	MKW11AL
NO.OF BEARINGS	1
INSULATION CLASS	H
WIRES	2
INGRESS PROTECTION	IP23
EXCITATION SYSTEM	SHUNT
VOLTAGE	±1%

ENGINE TECHNICAL DATA	
ENGINE MAKE	MAKAWA
ENGINE MODEL	MKWY490D
GOVERNING TYPE	ELECTRONIC
NUMBER OF CYLINDERS	4
CYLINDER ARRANGEMENT	IN-LINE
BORE AND STROKE (mm)	90 X 105
DISPLACEMENT	2.67 L
ASPIRATION	NATURAL-ASPIRATED
CYCLE	4 STROKE
COMPRESSION RATIO	18.5:1
COOLING SYSTEM	WATER-COOLING
FREQUENCY & ENGINE SPEED	50HZ & 1500RPM

CANOPY:	
LENGTH mm	≤1790
WIDTH mm	≤810
HEIGHT mm	≤1360
WEIGHT*kg	≤650
FUEL TANK CAPACITY	70L
Sound level @7m	67dB
CONTROL PANEL	

	PRIME	STANDBY	MAKE	MEBAY
GROSS ENGINE POWER kW	24	26.4	MODEL	DC70DR
FUEL CONSUMPTION @ 100% L/hr	3.5	-		
FUEL CONSUMPTION @ 75% L/hr	2.8			

PLEASE REFER TO DC70DR BROCHURE FOR MORE DETAILS
AN INSPIRED DESIGN TO MEET YOUR NEEDS

DIESEL GENERATOR SET - MAKAWA POWER

RATINGS DEFINITION

PRIME POWER

THESE RATING ARE APPLICABLE FOR SUPPLYING CONTINUOUS ELECTRICAL POWER (AT VARIABLE LOAD) IN LIEU OF COMMERCIALY PURCHASED POWER. 10% OVERLOAD POWER IS AVAILABLE FOR 1HOUR IN 12HOURS CONTINUOUS OPERATION.

STANDBY POWER

THESE RATING ARE APPLICABLE FOR SUPPLYING CONTINUOUS ELECTRICAL POWER (AT VARIABLE LOAD) IN THE EVENT OF A UTILITY POWER FAILURE. NO OVERLOAD IS PERMITTED.

STANDARD REFERENCE CONDITIONS

OUTPUT RATING ARE PRESENTED AT 27°C AIR INLET TEMPERATURE, BAROMETRIC PRESSURE 100kPa, RELATIVE HUMIDITY 30%. THIS GENERATING SET IS DESIGNED TO OPERATE AT HIGH AMBIENT TEMPERATURE (UP TO 52°C), HUMIDITY (UP TO 90%) AND HIGH ALTITUDES. DE-RATION MAY APPLY, PLEASE CONSULT US FOR SPECIFIC SITE RATINGS.

AVAILABLE OPTIONS & ACCESSORIES

WE OFFER A RANGE OF OPTIONAL FEATURES AND ACCESSORIES TO TAILOR OUR GENERATING SETS TO MEET YOUR POWER NEEDS.

OPTIONS

- A VARIETY OF GENERATING SET CONTROL AND SYNCHRONIZING PANELS
- ADDITIONAL PROTECTION ALARMS AND SHUTDOWNS
- WATER - FUEL SEPERATOR
- WATERJACKET HEATER
- BATTERY CHARGER

ACCESSORIES

- GENUINE SPARE PARTS
 - AUXILIARY FUEL TANKS
 - MANUAL & AUTOMATIC TRANSFER SWITCHES
 - Ground conection: YES
- EMISSION STANDARDS

Certificates :
ISO 9001:2015, ISO 14001:2015
Operability:

- The machine runs continuously 24/24 at 100% of the machine's continuous capacity
- Can operate 110% overload for 1 hour/12 hours of continuous operation

STANDARD SPECIFICATIONS

6. FUEL SYSTEM

Attached to the machine base frame; Made of sturdy, chemically treated steel to prevent rust and increase paint adhesion.

6.1: Machine frame – base

Firm, load-bearing, with shock absorbers and anti-vibration so that the machine operates smoothly and balanced, without affecting surrounding equipment and structures; Has a shock-absorbing rubber sole

7. ALTERNATOR

7.1 INSULATION SYSTEM

• THE INSULATION SYSTEM IS CLASS H PROTECTION.

• ALL WINDINGS ARE IMPREGNATED IN EITHER A TRIPLE DIP THERMOSETTING LIQUID, OIL AND ACID RESISTING WITH A SPECIAL POLYESTER RESIN.

• HEAVY COAT OF ANTITRACKING VARNISH ADDITIONAL PROTECTION AGAINST MOISTURE OR CONDENSATION

7.2 AUTOMATIC VOLTAGE REGULATOR (AVR)

• THE FULLY SEALED AUTOMATIC VOLTAGE REGULATOR MAINTAINS THE VOLTAGE REGULATION AT ±1%.

7.3 MOTOR STARING (OPTIONAL)

• AN OVERLOAD CAPACITY EQUIVALENT TO 300% OF THE FULL LOAD IMPEDANCE AT ZERO POWER FACTOR CAN BE SUSTAINED FOR 10 SECONDS, WHEN AREP (AUXILIARY WINDING)OPTION IS FITTED.

8. MOUNTING ARRANGMENT

8.2 ANTI-VIBERATION MOUNTING DUMPER

DUMPER ARE AFFIXED BETWEEN THE ENGINE & ALTERNATOR FEET AND THE CHASSIS, THUS ENSURING COMPLETE VIBRATION ISOLATION OF ROTATING ASSEMBLY.

8.3 COUPLING

THE ENGINE AND ALTERNATOR ARE DIRECTLY COUPLED BY MEANS OF AN SAE FLANGE. THE ENGINE FLYWHEEL IS FLEXIBLY COUPLED TO THE ALTERNATOR ROTOR.

8.4 SAFETY GUARDS

THE FAN & FAN DRIVE ALONG WITH THE BATTERY CHARGING ALTERNATOR ARE SAFETY GUARD PROTECTED FOR PERSONAL PROTECTION.

9. TESTS

- THE GENERATING SET IS LOAD TEST BEFORE DISPATCH. POLYESTER VARNISH OR VACUUM PRESSURE IMPREGNATED
- ALL PROTECTIVE DEVICES CONTROL FUNCTIONS AND SITE LOAD CONDITIONS ARE SIMULATED. THE GENERATOR AND IT'S SYSTEMS ARE CHECKED BEFORE DISPATCH.

10. EQUIPMENT FINISHING

ALL MILD STEEL COMPONENTS ARE FULLY DEGREASED AND PAINTED WITH POWDER COATED PAINT TO ENSURE MAXIMUM SCUFF RESISTANCE AND DURABILITY.

11. EQUIPMENT FINISHING

OPERATION & MAINTENANCE MANUAL, CIRCUIT WIRING DIAGRAMS.

12. QUALITY STANDARDS

THE EQUIPMENT MEETS THE FOLLOWING STANDARDS:BS4999, BS5000, BS5514, IEC60034, VDE0530 AND ISO8528

13. Allowable voltage deviation: 1%

Permissible frequency deviation: 1%

14. System starts: Electric starter with lithium battery starter 12.8VDC, 350A 15. Drive mechanism: Directly by coaxial coupling

16. Soundproof enclosure:

- Made of steel, soundproof shell thickness 2mm; The surface is chemically treated to prevent oxidation and is electrostatically painted, with a lock to ensure the safety of the case. Resistant to the effects of tropical climate and high temperatures, the machine can be placed outdoors, and has a heat-exhaust system.
- Door structure: The control part has a glass door to easily observe working parameters from the outside. The doors have safety locks and tight gaskets. Noise-proof materials: Use fireproof materials, durability high.

17. Anti-vibration system:
The motor and generator are mounted on an anti-vibration rubber system,
ensuring high load and vibration resistance

Meet the national technical regulations on industrial emissions for dust and inorganic substances (QCVN19:2009/BTNMT).

+ The exhaust system is designed to ensure ventilation for the surrounding environment.

COOLING SYSTEM

Cooling method (compliance with TCVN 6627-6:2011)

WATER-COOLING

ABILITY START Able to boot from 0% load to 100% load within 30s

Operate:

The machine is operated by an electric ignition lock or soft button, brushless, automatically stimulated, and automatically adjusts the voltage when there is a change in the AVR load level.

ALL OF THE GENERATING SETS ARE COVERED UNDER A **8.1 CHASSIS** WARRANTY POLICY FOR A PERIOD OF 12MONTHS OR 1 YEAR THE COMPLETE GENERATING SET IS MOUNTED AS A WHOLE ON (WHICHEVER COMES EARLIER) OF THE EQUIPMENT IS IN A HEAVY DUTY FABRICATED STEEL CHASSIS. LINE WITH MANUFACTURERS WARRANTY TERMS AND CONDITIONS.

IN LINE WITH CONTINUOUS PRODUCT DEVELOPMENT, WE RESERVE THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.