

shindaiwa®

SPECIFICATIONS

Diesel Engine Generator **DG45MK-400**

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CHAPTER 1: GENERAL

1. Standard

Design and production are in conformity with:

- (1) Japan Industrial Standards (JIS)
- (2) Low Noise Type Construction Machinery Standard
- (3) Voluntary Emission Regulations for non-road engines in Japan by MLIT. (Tier 2)

*MLIT : Ministry of Land, Infrastructure, Transport and Tourism.

2. Design Condition

- (1) Installation Place: Outside Only.
- (2) Ambient Temperature: 5 to 104° F (-15 to 40°C)
- (3) Humidity: Less than 80%
- (4) Altitude: Less than 984 ft. (300 m) above sea level

3. Test and Check

Test shall be conducted with a complete workable unit of the diesel engine unit.

Check Items:

- (1) Insulation and Dielectric Test
- (2) Starting
- (3) Protection Device Working Test
- (4) Voltage Deviation and Speed Variation: 0-4/4 Load
- (5) Load Test: Welding and Generating 4/4 Load

4. Painting

Painting and color specifications are as per manufacturer's standard.

5. Structure

- (1) Bed and Vibration Proof Device
Alternator is directly coupled with engine and both are installed on the bed through the vibration proof device.
- (2) Low Noise
Low noise structure is put in the inside of the bonnet.
Sound Level: 58 dB(A) @7m distance under no load.
- (3) Fuel Tank
A steel fuel tank is equipped and incorporated with the electrical level gauge.

CHAPTER 2: SPECIFICATIONS

Model		Unit	DG45MK-400	
Alternator	Generating Type	-	Rotating Filed, Brushless 3-Phase Synchronous Alternator	
	Rated Frequency	Hz	50	60
	Rated Output	kVA	37	45
		kW	29.6	36
	Rated Voltage	V	400 [200] *1	440 [220] *1
	Rated Current	A	53.4 [106.8] *1	59.0 [118.1] *1
	3-Phase Receptacle Output	kVA	22.2/24.4	
	1-Phase Receptacle Output	kW	3.5x2/3.6x2	
	Winding	-	3-phase, 4-wire	
	Power factor	%	3-phase 80, 1-phase 100	
	Insulation class	-	F	
	Excitation	-	Self-Excitation(Brushless)	
	No. of poles	-	4	
Engine	Types	-	Vertical Water-cooled 4-cycle Diesel Engine	
	Model (Manufacturer)	-	V3800DI-T (KUBOTA)	
	No. of Cylinders (bore x stroke)	mm	4 (100 X 120)	
	Continuous rated output	kW	38.0	45.6
		PS	51.7	62.0
	Rated speed	min ⁻¹	1500	1800
	Displacement	L	3.769	
	Combustion system	-	Direct Fuel Injection with Turbo Charger	
	Cooling method	-	Radiator	
	Lubricating method	-	Forced lubrication	
	Starting method	-	Electric start	
	Fuel	-	Diesel Fuel (ASTM No. 2-D)	
	Lubricant oil	-	CD class	
	Fuel tank capacity	L	105	
	Lubricant volume (Full)	L	13.2	
	Cooling water volume	L	12.5	
	Starting motor capacity	V-kW	12 – 2.5	
Charging dynamo capacity	V-A	12 - 30		
Battery	-	80D26R		
Unit	Length	mm	1750	
	Width	mm	880	
	Height	mm	1415	
	Dry Weight	kg	1025	
	Installed Weight	kg	1145	

*Specifications are subject to change without notice.

CHAPTER 3: EQUIPMENT AND FEATURE

1. Equipment

(1) Generator

Voltage Meter	1 pc.
Ampere Meter	1 pc.
Frequency Meter	1 pc.

(2) Safety Device

Circuit Breaker - with leakage shut off device	1 pc.
Over Load Caution Lamp	1 pc.
Earth Leakage Relay	1 pc.

Protective Monitor 1 set

- Battery Charge (with auto engine shutdown feature)
- Oil Pressure (with auto engine shutdown feature)
- Over Speed (with auto engine shutdown feature)
- Water Temp. (with auto engine shutdown feature)
- Air Filter (warning light turns when clogged)
- Water Separator (warning light turns when the separator exceeds the limit)

Terminal Cover/Fuel Cover (w/ locking feature)	1 pc. ea.
Front Panel/Right "keyed" Doors	1 pc. ea.

Automatic Shut-Down Feature (when some protective problems are detected.)

(3) Equipment

Fuel Meter	1 pc.
Water Temp. Meter	1 pc.
Monitor Lamp	1 set
Over Load Pre-caution Lamp	1 pc.
Preheat Lamp	1 pc.
Throttle Switch	1 pc.
Starter Switch	1 pc.
Frequency Selector Switch	1 pc.
400/440V Output Lamp	1 pc.
Fuel Tank	1 pc.
Fuel Filter (w/ fuel strainer)	1 pc.
Air Cleaner	1 pc.
Fuel Drain Plug	1 pc.
Oil Drain Plug	1 pc.
Cooling Water Drain Plug	1 pc.
Hour Meter	1 pc.
Pilot Lamp	1 pc.
Low Noise Air Flow System	

2. Feature

(1) Feature

- Sound Level 58B(A) at 7m distance under no load.
- Generating Performance 3-Phase
- 2 Way Drive Control High/Low Speed
- Environmental Quiet Sound System, Spill Containment
- Fuel Tank Capacity 27.7 gal. (105 Liters)
- Dry Weight 2260 lbs. (1025 kg)
- Dimensions (LxWxH) 68.9" x 34.6" x 55.7" (1750 x 880 x 1415 mm)

(2) Protection Device

Item	Set Value	Engine Shut-Down
Water Temp.	230° F/110°C	✓
Low Battery Charge	below 8V	✓
Low Oil Pressure	7 psi/49kPa	✓
Air Filter	when clogged	No
Over Speed	2070 min ⁻¹	✓
Over Load	Approx. 80% of Rated Output	No

(3) Fuel Economy

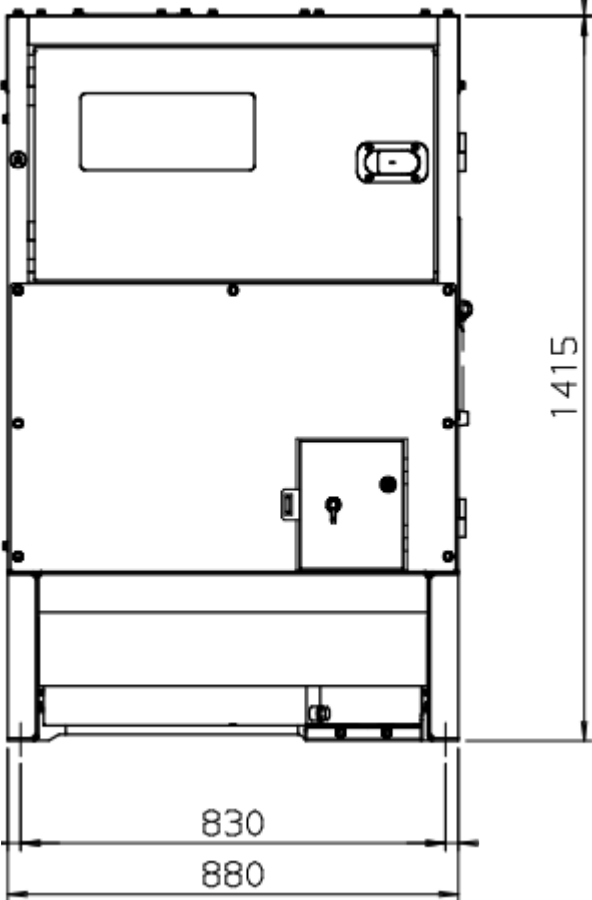
Criteria	Fuel Consumption	Continuous Operation
Full load	2.31 gal./hr (8.75L/hr.)	12 hrs.
3/4 load	1.73 gal./hr (6.56L/hr.)	16 hrs.
1/2 load	1.26 gal./hr (4.77L/hr.)	22 hrs.
1/4 load	.84 gal./hr. (3.18L/hr.)	33 hrs.
No Load	n/a	n/a

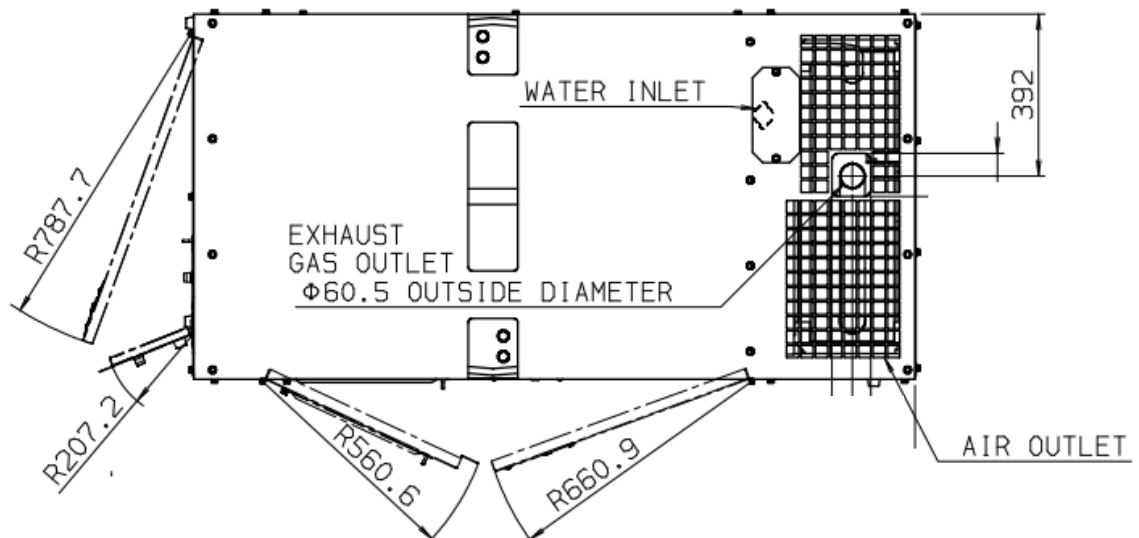
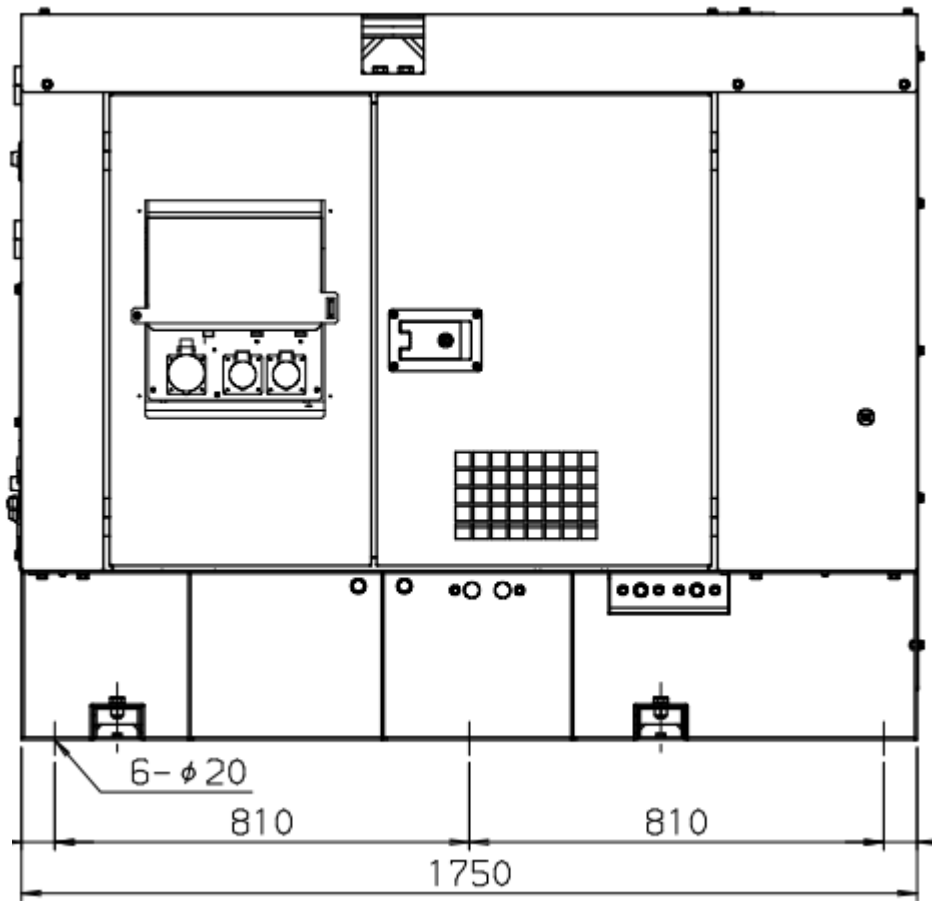
*Above data is for reference only as it changes per condition in use.

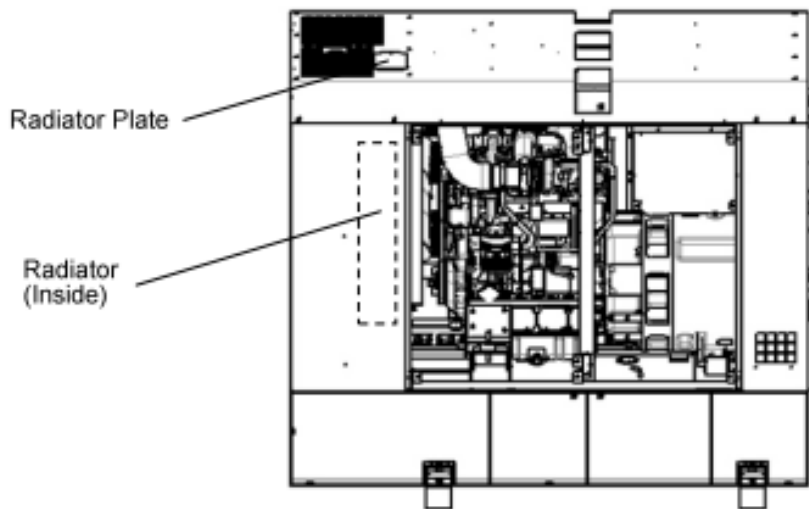
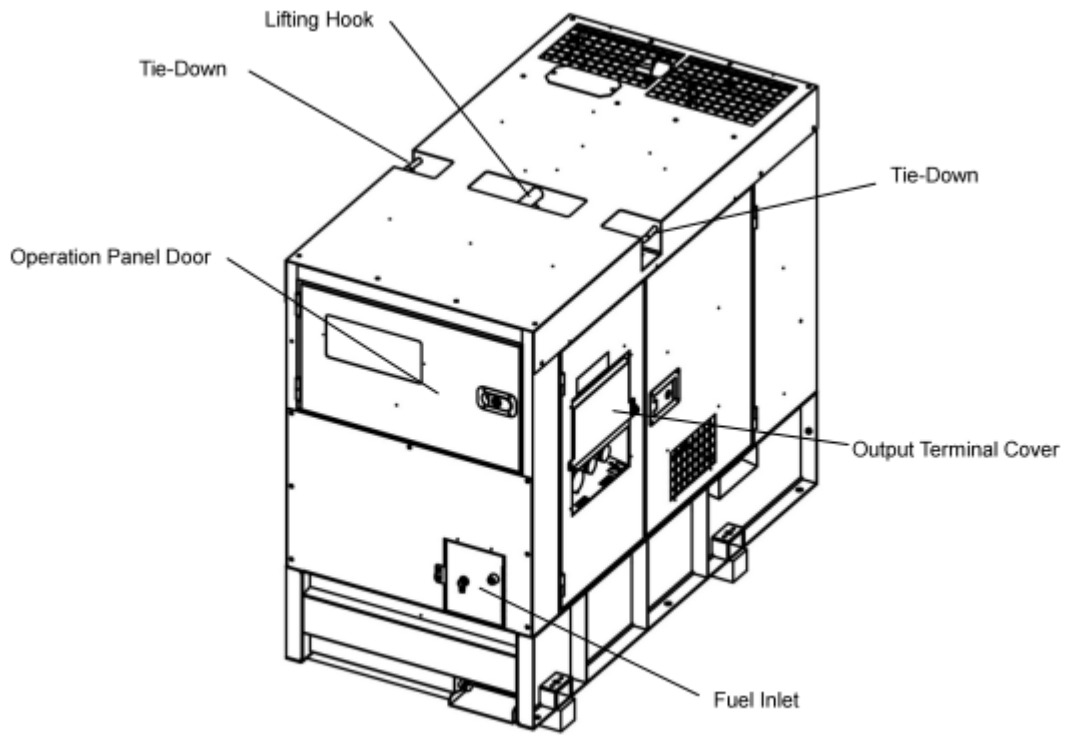
(4) Accessory

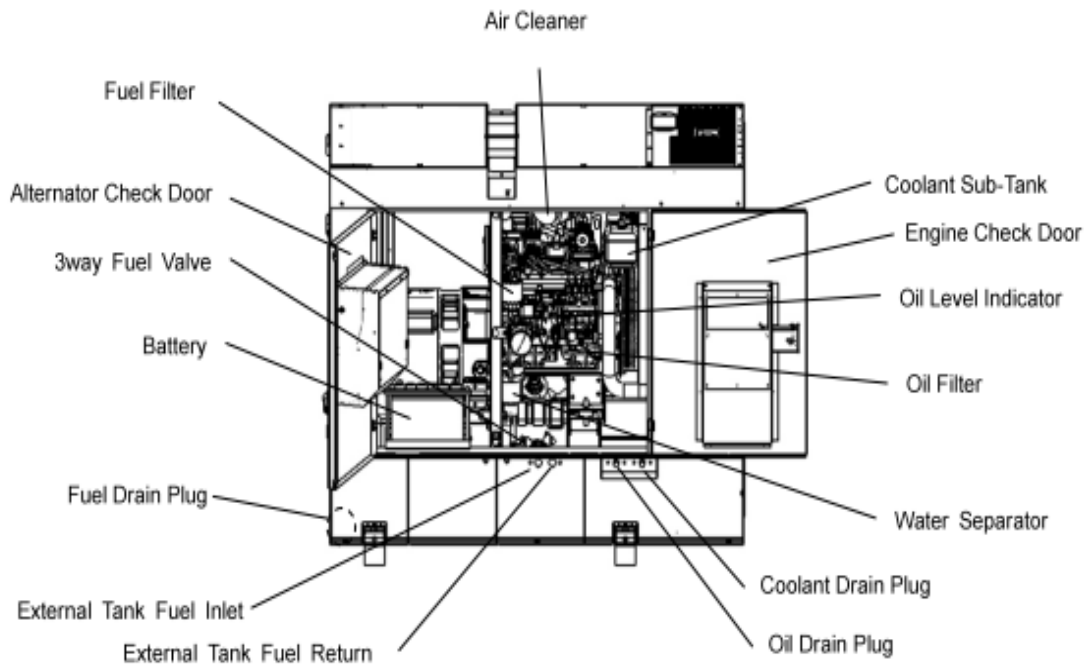
- Operator's Manual 1 copy
- Starter Key 2 pcs.
- Door Key 2 pcs.
- Grounding Rod 1 set

CHAPTER 4: APPEARANCE









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