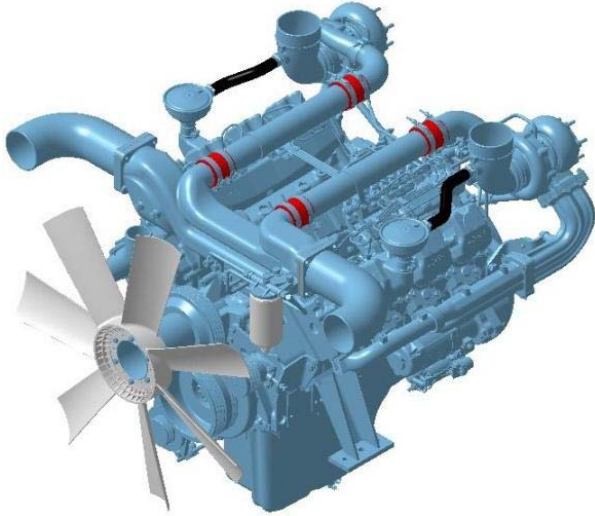


DIESEL GENERATOR SET

DAEWOO GENERATOR GENPOWER DWG450E

380V ~ 220V / 60HZ / WATER COOLING



Engine Speed rev/min	Type of Operation	Engine Power	
		kWm	PS
1800	Continuous Power	*	*
	Prime Power	442	601
	Standby Power	489	665
1500	Continuous Power	*	*
	Prime Power	392	533
	Standby Power	433	589

- The engine performance corresponds to ISO 3046, BS 5514 and DIN 6271.
- Ratings are based on ISO 8528.
- Prime power available at variable load. The permissible average power out put (during 24h period) shall not exceed 70% of the prime power rating
- Standby power available in the event of a main power network failure. No overload is permitted

MECHANICAL SYSTEM

-Engine Model	DP158LC
-Engine Type	4 cycle, V-type water cooled Turbo charged & intercooler (air to air)
-Combustion type	Direct injection
-Cylinder type	Replaceable dry liner
-Number of cylinders	8
-Bore x stroke	128 x 142mm
-Displacement	14.618 liters
-Compression ratio	15 : 1
-Firing order	1-5-7-2-6-3-4-8
-Injection timing	23° ±1° BTDC @ 1800 rpm, 18° ±1° BTDC @ 1500 rpm,
-Compression pressure	Above 28 kg/cm2(398 psi) at 200rpm
-Dry weight	1155kg (with fan)
-Dimension (LxWxH)	1,274 x 1.138 x 1.207 mm
-Rotation	Counter clockwise viewed from Flywheel
-Fly wheel housing	SAE NO.1M
-Fly wheel	Clutch NO.14M

FUEL CONSUMPTION

-Prime Power (lit/h)	1.500 rpm	1.800 rpm
25%	27.6	32.3
50%	48.9	57.7
75%	72.9	83.4
100%	99.6	111.5
-Standby Power (lit/h)	1.500 rpm	1.800 rpm
25%	29.6	34.9
50%	53.4	62.7
75%	80.5	91.4
100%	110.9	123.8

FUEL CONSUMPTION

-Injection pump	Bosch in-line "P" type
-Governor	Electric type
-Feed pump	Mechanical type
-Injection nozzle	Multi hole type
-Opening pressure	28 MPa
-Fuel filter	Full flow, cartridge type
-Used fuel	Diesel fuel oil

LUBRICATION SYSTEM

-Lub. Method	Fully forced pressure feed type
-Oil pump	Gear type driven by crankshaft
-Oil filter	Full flow, cartridge type
-Oil pan capacity	Max. 22liters, min. 13liters
-Angularity limit	Front down 10 deg. Front up 10 deg. Side to side 22.5 deg.
-Lub. Oil	Refer to Operation Manual

MECHANISM

-Type	Over head valve
-Number of valve	Intake 1, exhaust 1 per cylinder
-Valve lashes at cold	Intake 0.25mm Exhaust 0.35mm

VALVE TIMING

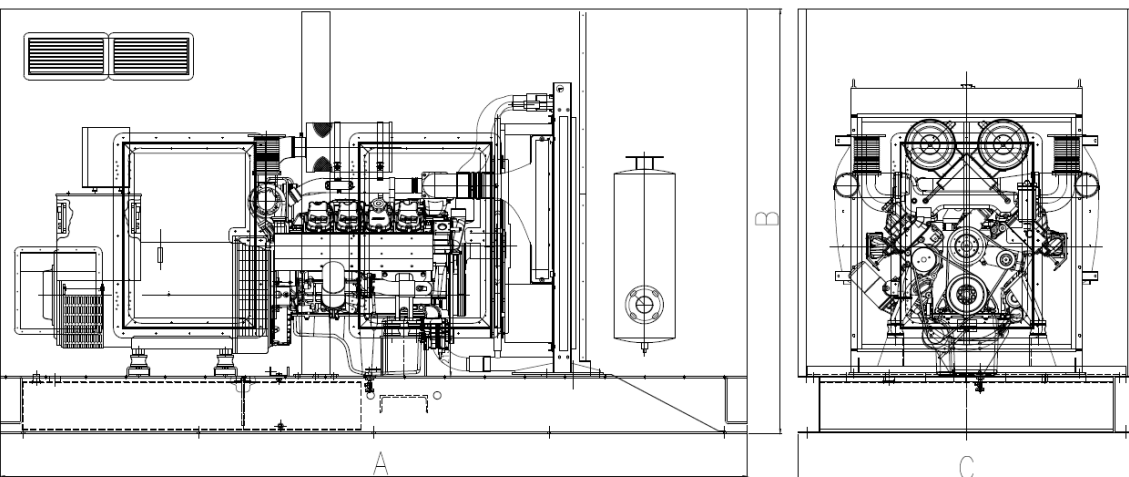
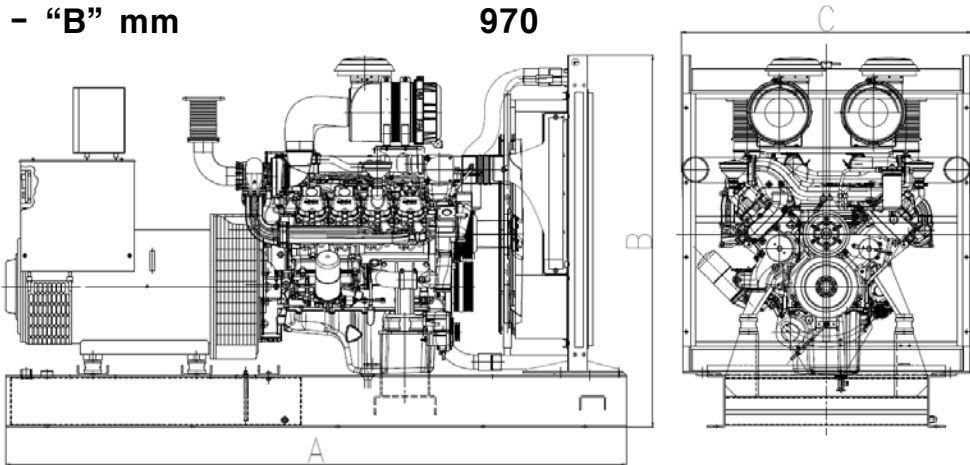
	Opening	Close
-Intake valve	24 deg. BTDC	36 deg. ABDC
-Exhaust valve	63 deg. BBDC	27 deg. ATDC

● COOLING SYSTEM

-Cooling method	Fresh water forced circulation
-Water capacity (engine only)	20 liters
-Pressure system	Max. 49kPa
-Water pump	Centrifugal type driven by gear
-Water pump Capacity	660liters/min 1800rpm 590liters/min 1500rpm
-Thermostat	Wax - pellet type Opening temp. 71°C Full open temp. 85°C
-Cooling fan	Blower type, plastic 915 mm diameter, 7 blade Blower type, plastic

● GENERATOR SPECIFICATION

-Model	DWG 450E
-Maker	Daewoo Generator
-Type	Synchronous generator
-Standby Power Rating	562KVA / 450KW
-Prime Power Rating	511KVA / 409KW
-Voltage	380V / 220V
-Current	855A
-Phase or Wire	3P4W
-Frequency	60Hz
-Power Factor	0.8
-Pole	4
-Revolution	1800rpm
-Connection	Y
-Insulation Class	H
-Excitation System	Self-Exciter
-Cooling System	Radiator Type
-Bearing	Single Bearing
- "A" mm	1265
- "B" mm	970



● ELECTRICAL SYSTEM

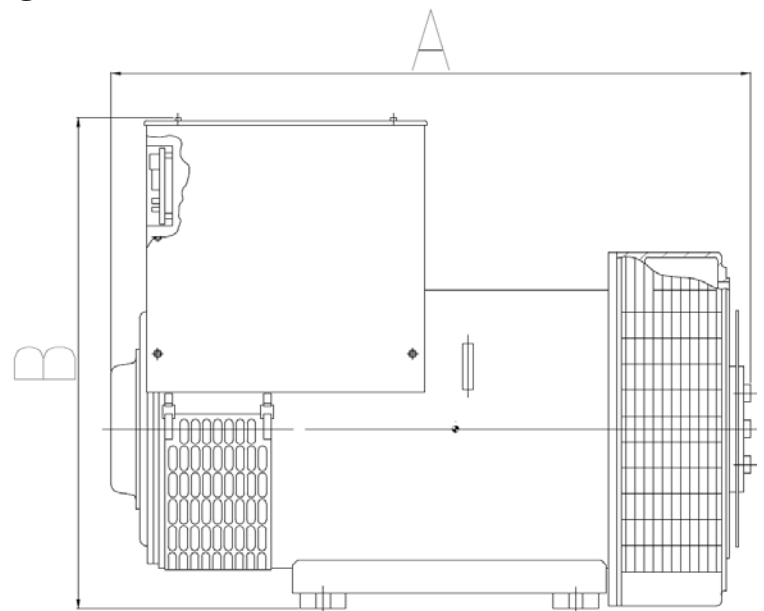
-Charging generator	27.5V x 45A alternator
-Voltage regulator	Built-in type IC regulator
-Starting motor	24V x 7.0kW
-Battery Voltage	24V
-Battery Capacity	2 x 200 AH (recommended)
-Starting aid (Option)	Block heater

● CONVERSION TABLE

in. = mm x 0.0394	lb/ft = N.m x 0.737
PS = kW x 1.3596	U.S. gal = lit. x 0.264
psi = kg/cm ² x 14.2233	kW = 0.2388 kcal/s
in ³ = lit. x 61.02	lb/PS.h = g/kW.h x 0.00162
hp = PS x 0.98635	cfm = m ³ /min x 35.336
lb = kg x 2.20462	

● ENGINEERING DATA

		1500 rpm	
		Prime	Standby
-intake Air Flow	m ³ /min	28.1	30.1
-Exhaust gas temp. after turbo	°C	507	529
-Exhaust Gas Flow	m ³ /min	81	88
-Heat Rejection to Exhaust	kW	368	410
-Heat Rejection to Coolant	kW	176	196
-Heat Rejection to intercooler	kW	90	100
-Radiated Geat to Ambient	kW	37	42
-Cooling water circulation	liters/min	590	590
-Cooling fan air flow	m ³ /min	700	700
		1800 rpm	
-intake Air Flow	m ³ /min	32.3	34.5
-Exhaust gas temp. after turbo	°C	518	543
-Exhaust Gas Flow	m ³ /min	93	101
-Heat Rejection to Exhaust	kW	413	458
-Heat Rejection to Coolant	kW	197	219
-Heat Rejection to intercooler	kW	100	112
-Radiated Geat to Ambient	kW	42	46
-Cooling water circulation	liters/min	660	660
-Cooling fan air flow	m ³ /min	850	850



Model	"A" mm	"B" mm	"C" mm	Weight kg
Open type	2990	1794	1396	3785
Soundproof type	3930	2230	1770	4130

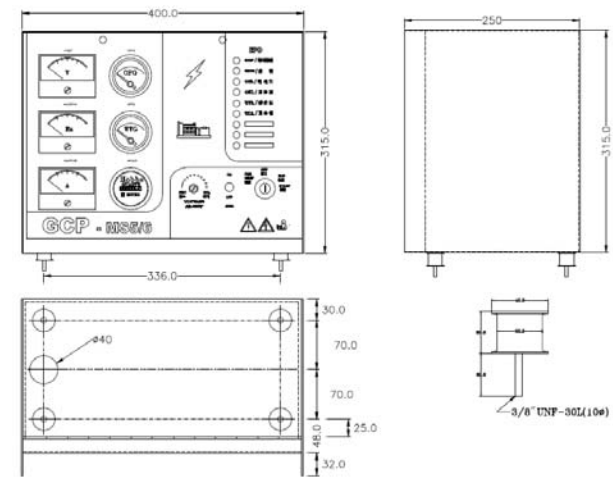
● GCP Panel (MS5)

Features

1. Steel case - after-sales service available
2. Generator capacity selection switch included
3. Frequency protection circuit included
4. Over excitation block circuit(output over voltage) included
5. Stable operation within low remaining voltage

Specifications

1. Output : 63Vdc, 5A
2. Power Input : 1P 220Vac(190~277), 50/60Hz
3. Sensing Input : 1P 190~440Vac, 50/60Hz
4. Dimensions(mm) : W550 * H250 * D250
5. Mounting Holes(mm) : W336 * H140 / 10Φ * 4Holes
6. Weight(kg) : 12



● GCP Panel (AL2)

Features

1. Digital, semi automatic and loadable
2. Automatic operating signal : power supply or dry contact
3. Enclosures : ABC, AVR
4. Relay ability
5. Oil pressure gauge, water temp gauge, DC voltage, engine hour meter included
6. Engine stops when emergency pushbutton pressed, over speed, oil pressure drop, high water temp, over/low frequency, voltage unbalance
7. Engine optionally stops when over current, low voltage, current unbalance
8. During normal operation engine stops when no MPU signal or no generator voltage
9. Stop solenoid damage prevention circuit included
10. 3pcs of CT, control wire, engine sensor/switch included

Specifications

1. Dimensions(mm) : W500 * H330 * D300
2. Mounting Holes(mm) : W420 * D190 / 10Φ * 4Holes
3. Weight(kg) : 14

