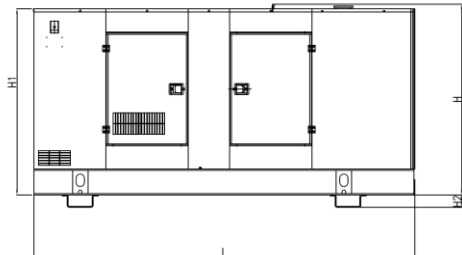
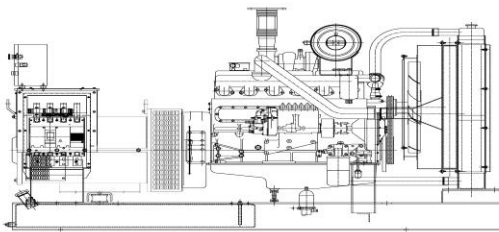


## POWER RATING

	With 50 Hz of frequency	With 60 Hz of frequency
Output voltage (Vac), 3Phase	380 ~ 440 Volts (208-220volt option)	380 ~ 480 Volts(208-240volt option)
Prime power	130 kW, 163 kVA	155 kW, 194 kVA
Standby power	145 kW, 181 kVA	170 kW, 212 kVA

Power ratings are made in accordance with ISO8528

## Weight and Dimensions



### Skid Type

Overall size (L\*W\*H), mm :  
2,594\*946\*1,660  
Weight : 1,620 kg

### Sound Proof Type

Overall size (L\*W\*H), mm :  
3,700\*1,112\*1,968  
Weight : 2,326 kg

## Generator Set Performance and Feature

- **RELIABLE HIGH QUALITY SYSTEM-** To improve the performance of Products, high quality auxiliaries equipment applied and optimized protection device built in the digital controller against malfunctioning and abnormal conditions.
- **FREQUENCY REGULATION ACCURACY-** Under varying loads from no load to 100% load at the rated power factor(0.8), frequency regulation is 5%(mechanical type governor), 1%(electric type governor).
- **VOLTAGE REGULATION ACCURACY-** Under varying loads from no load to 100% load at the rated power factor (0.8), voltage regulation is less than  $\pm 2.5\%$ .
- **VOLTAGE ADJUSTABLE RANGE-** Under rated speed and no load condition, voltage adjustable range is less than  $\pm 5\%$  of rated voltage.
- Applied the 2/3 pitch winding to reduce the 3rd harmonics.
- Designed by using the latest technologies and the best materials available to guarantee high efficiency value.
- Impregnated with high-grade resin and protection against hostile environment is provided as standard.
- Supplied with over exciting current and under frequency protection built in the AVR.
- Suitable for parallel operation with other generator or mains power. (Parallel kit is available on request.)
- **SIMPLE AND EASY OPERATION-** With centralized controls simplifying generator operation and supervision is made very simple.
- **LOW COST MAINTENANCE & OPERATION-** Use the specialized diesel engine for generator set keeps operation costs very low.

## ENGINE

Manufacturer ..... Doosan Infracore  
Model..... P086TI-1  
Prime power  
At 50 Hz ..... 149 kWm (203 ps)/ 1500 rpm  
At 60 Hz ..... 174 kWm (237 ps)/ 1800 rpm  
Standby power  
At 50 Hz ..... 164 kWm (223 ps)/ 1500 rpm  
At 60 Hz ..... 191 kWm (260 ps)/ 1800 rpm  
Nos. of cylinder ..... 6 cylinders  
Block & cycle ..... In-line 4 cycle  
Displacement..... 8.071 liters  
Compression ratio..... 16.4:1  
Fire order..... 1,5,3,6,2 to 4  
Cylinder type ..... Replaceable dry liner  
Bore x stroke ..... 111 x 139 mm  
Aspiration ..... Turbo charged & Intercooled  
Rotation ..... Anti-clockwise (view from flywheel)

*NOTE-The Engine performance corresponds to ISO3046, BS5514 and DIN 6271.*

## LUBRICATION SYSTEM

Oil filter..... Cartridge type  
Lube method ..... Full forced pressure feed  
Oil consumption ..... 0.5 grams per ps and hour  
Oil pump type ..... Gear driven by crankshaft  
Max oil temp. .... 120 Celsius degree  
Shutdown setting..... 0.5 to 0.7 kg/cm<sup>2</sup>  
Oil Type..... SAE15W40CE

## FUEL SYSTEM

Fuel filter ..... Cartridge type  
Injection pump ..... Zexel in-line "P" type  
Governor ..... Electric Type  
Fuel type ..... Light diesel fuel, DIN51601, BS2869, ASTM D975  
Fuel tank ..... mounted in bed  
Fuel consumption at prime operation (liter/hr)  
At 50 Hz ..... min 11.3, max 43.1 (lph)  
At 60 Hz ..... min 13.8, max 50.6 (lph)  
*NOTE- based on min at 25% loaded, max at 100% loaded*

## ELECTRICAL SYSTEM

Battery ..... Nos. 2 x 120 AH  
Alternator..... 24 Vdc, 45 A  
Starting motor..... 24 Vdc, 6 kW

## GENERATOR

Type ..... Revolution Field  
Phase & wire ..... 3P4W  
Power factor..... 0.8

## GENERATOR

Nos. of Pole ..... 4  
Speed ..... 1500/50, 1800/60 (rpm/Hz)  
Insulation Class..... H  
Excitation..... Self-Excited, Brushless  
Method of cooling ..... Self ventilation  
Winding Pitch ..... 2/3  
One-step load ..... 100% (NFPA110)  
Coupling..... Flexible Disc  
Bearing ..... Single, Ball Bearing  
Connection ..... Star (Wye)  
Insulation grade ..... IP22  
Over speed ..... 1800 rpm  
Overload ..... 110% for 1 hr of rated power

*NOTE- Generator is in compliance with IEC 60034-1, CEI 2-3, BS4999-5000, VDE 0530, NF 51-100, 111, OVE M-10, NEMA MG 1.22*

## EXHAUST SYSTEM

Exhaust gas flow ..... 38.8 m<sup>3</sup>/min at 60Hz  
Exhaust gas temp..... 530 degree Celsius at 60Hz  
Max permissible restriction (mmH2O)  
Intake system ..... initial 220, end 635  
Exhaust system ... 600  
Silencer/muffler ..... Nos.1 x Dry type  
Exhaust outlet..... Nos.1 x 4 inches (100A),  
Based on 10meter

## COOLING SYSTEM (Standard Radiator)

Type ..... Water cooled  
Pump capacity ..... l/min 150 @60Hz  
Thermostat operating temp (Celsius degree)  
Opening ..... 71  
Full open ..... 85  
Shutdown set ..... 103±3  
Radiator grill size..... 800 x 925 (L x H, mm)

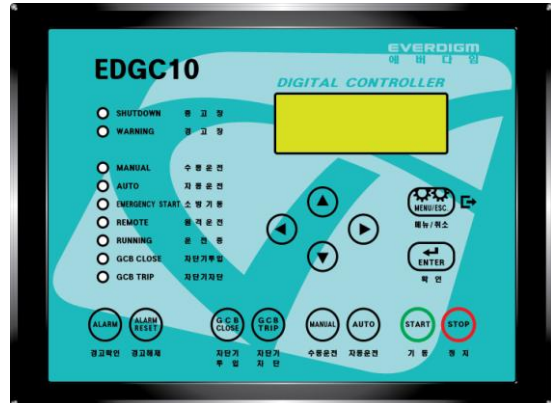
## AIR SYSTEM

Air cleaner type ..... Dry, paper element  
Radiator duct area  
Air inlet duct ..... 0.888 m<sup>2</sup>  
Air outlet duct ..... 0.740 m<sup>2</sup>

## SERVICE REFILL CAPACITY

Fuel tank ..... Skid : 132 liters  
Sound Proof : 300 liters  
Engine oil ..... 15.5 liters  
Coolant ..... 48.5 liters

**CONTROL PANEL mounted**



Dimension (W x H x D): 450 x 600 x 200 (mm)

SPECIFICATION		
<b>SWITCH&amp; PUSH BUTTON</b>		
Manual/Remote/Auto button		O
Stop button		O
GCB Close/Trip button		O
Alarm button		O
Direction/Enter/ESC button		O
Emergency stop push button		O
Main Power Switch		O
Voltage Adjuster		O
<b>DISPLAY</b>		
Digital Volt./Current/Power/PF/Hz		O
Running Hours/Kilowatt hour		O
RPM/DC Voltage		O
Oil press./Coolant temp		O
Cooldown time/Mains power live/Failure sensing time		O
<b>BREAKER</b>		
Main molded case circuit breaker (MCCB 4P)		O (3P as option)
Circuit protector for DC source		O
Breaker for main power/coolant heater		O
<b>INDICATOR &amp; PROTECTION SYSTEM</b>		
Main power lamp		O
Manual/Remote/Auto, LED		O
Running, LED		O
GCB close/trip, LED		O
Emergency stop, LCD		O
Over voltage/Under voltage/Over Current, LCD		O
High coolant temperature, LCD		O
Low lub. oil pressure, LCD		O
Fail to start, LCD		O
Over speed, LCD		O
<b>REMOTE SYSTEM</b>		
PC Monitoring program		▲
Dry Contact (Mains Power, Running, Fault)		O
<b>CONTROL SYSTEM</b>		
SPEED CONTROL UNIT		O
<b>OTHERS</b>		
Dry Contact (Extension Module)		▲
Battery Charger		O

O: Equipped as standard

▲: To be equipped as option

X: not applicable

## STANDARD EQUIPMENT

### Engine

Fuel oil filter  
 Lub. oil filter and drain valve  
 Air cleaner  
 Lubricate oil  
 Fan Belt

### Control panel

Digital control panel (EDGC10)

### Exhaust

Silencer (Sound attenuation up to 20db)  
 Bellows

### Voltage Connection

- 50Hz: 400V/230V  
 - 60Hz: 380V/220V

### Electrical System

Battery and Battery cable  
 Charging Alternator

### Manual

Operation & Maintenance manual  
 Generator part book  
 Engine part book

## OPTIONAL EQUIPMENT

### Engine

Battery auto charger (For Standby Power usage)

### Control panel

Analog control panel  
 Self-standing panel  
 Parallel control panel : Island or Grid Mode

### Enclosed Unit

Weather Proof Enclosure  
 Sound Proof Enclosure  
 Containerized Enclosure

### Cold climate heater

Coolant heater, AC 120V/240V  
 Fuel heater, DC 24V  
 Air heater, DC 12V \* 2EA

### Spare parts

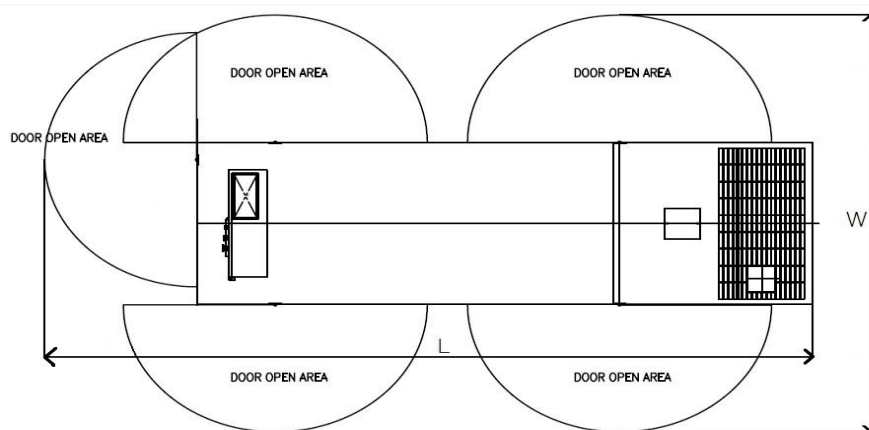
PM (preventive maintenance) parts; filters & oils  
 RSP (recommended spare parts)

### Fuel Options

Fuel Water Separator  
 Free Standing Fuel Tank

### Tropical Cooling System

## SOUND PROOF CANOPY (Option)



L : 4500mm, W : 2700mm

## NOISE LEVEL

TYPE	NO LOAD		FULL LOAD	
	1m	7m	1m	7m
SOUND PROOF	80 dB	70 dB	82 dB	71 dB