

**TECHNICAL SPECIFICATIONS FOR 7.5 KVA TO 15 KVA, 2 CYLINDER
MAHINDRA POWEROL DIESEL GENERATOR SET PACKAGED BY **INNOVA DIESEL™****

ENGINE:

Mahindra Powerol Internal Combustion (IC) Diesel Engine conforming to **BS5514 Standards** CPCB Emission Norms, Standard Design, Inline, 4 Stroke, Direct Injection type, Liquid Cooled Naturally Aspirated engine rated at 1500 RPM, 12 VOLT DC Electric Start type.



SCOPE OF SUPPLY FOR DIESEL GENERATING SET PACKAGE

FUEL SYSTEM:

- Fuel injectors with fuel lift pump
- Fuel injection pump
- Mechanical Governor **A1 Class type**
- Full flow fuel filter/s

COOLING SYSTEM:

- Radiator with set of hose pipes
- Coolant circulating pump
- Pusher type fan
- Thermostat
- Crank shaft pulley for fan belt
- Set of fan belt

LUBRICATION SYSTEM:

- Wet sump with filler and dipstick
- Full flow spin-on lube oil filter
- Gear driven lube oil pump with strainer

AIR SYSTEM:

- Air Inlet manifold
- Air filter assembly with dry type filter element

ALTERNATOR:

Synchronous Alternator suitable for close coupling with engine, rated for 3 Phase/ 1 Phase supply at 415 V / 240 V , 50 Hz, 0.8 Pf (lag) @ 1500 RPM with $\pm 0.5\%$ voltage regulation, Class H insulation conforming to IS 13364 / IS 4722 / BS 4999-5000 standards, Self excited, self regulated, screen protected and drip proof enclosure of IP 23.

FLY WHEEL & HOUSING:

- Fly wheel SAE 10
- Fly wheel housing SAE 3
- Starter Ring gear

EXHAUST SYSTEM:

- Exhaust manifold
- Flexible steel exhaust Bellow
- Residential Silencer

ELECTRICAL SYSTEM – 12 VOLT DC:

- 12 Volts Starter Motor and 12 Volts Battery charging alternator with integral regulator for DC output
- 12 Volts high coolant temperature trip switch
- 12 Volts low lube oil pressure trip switch
- 12 Volts fuel shut off solenoid
- Starter key / Starter Push

ACOUSTIC ENCLOSURE:

It is made out of CRCA steel sheet fabricated with the following features:

- Design to meet CPCB norms of 75 dB (A) at 1 Mtr. Distance in free field condition as per testing procedure of ISO: 8528 (Part 10) – 1998.
- It is made on sophisticated / special purpose CNC machines for consistency in quality and workmanship.
- Powder coated with superior finish with UV resistance powder coating.
- Insulation materials used are the best in the industry for better sound attenuation

GENERAL DATA OF THE DIESEL ENGINE

Sl. No	Description	7.5 – 10 KVA	12.5 – 15 KVA
1	No. of cylinders	2	
2	Engine Model	2185 GM-C2	2205 GM-C2
3	Bore x Stroke (in mm)	88.9 x 110	88.9 x 120
4	Displacement (in cc)	1365	1489
5	Aspiration	Naturally Aspirated	
6	Compression ratio	19.4+/-0.5:1	20.5+/-0.5:1
7	Firing Order	1-2	
8	Rotation	Anti-clock wise when viewed from fly wheel end	
9	Cooling System	Liquid Cooled type	
10	Lube oil grade to be used	CH4 15W40	

BATTERY:

12 Volts DC x 1 no. dry uncharged / pre-charged low maintenance lead acid type battery

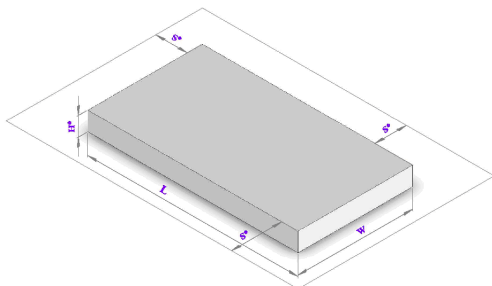
FUEL TANK:

Integral / Sub-base fuel tank for 8 hours operation

FUEL TANK CAPACITY	
KVA	No. of Ltrs.
7.5-10-15	90

DG SET FOUNDATION PLATFORM REQUIRED:

DG SET Rating in KVA	Length x Width x Height L X W X H (IN mm)
7.5-10-12.5-15	2100 x 1200 x 150



CONTROL PANEL:

Manually operated **Standard** Running Control Panel located within the Acoustic Enclosure, cubical type; powder coated with hinged doors, undrilled bottom gland plate made out of 18 / 16 gauge CRCA sheet provided with the following:

- MCB (3 Pole / 1 Pole)
- **Multi-data Digital Meter (MDM) to read the following parameters:**
- ✓ **ALTERNATOR OUTPUT / ELECTRICALS:** Voltage, Current, Frequency, kwh
- **ENGINE GAUGING:** Lube oil pressure, coolant temperature, engine speed in rpm, engine run hours, DC voltage, engine service hour etc.
- **Current Transformers:**
- ✓ Aluminium busbar of suitable capacity with incoming and outgoing termination
- ✓ Indicating lamp for 'DG Set ON' & 'LOAD ON'
- ✓ Set of instruments, fuses / MCBs duly wired and ferruled

MCB RATING		
KVA	Amps	
	3 Ph	1 Ph
7.5-10-12.5	16	16
15	20	20

Note to the End-User:

At the DG set installation site, following to be made available:

- Minimum 60% ventilation for free flow of fresh air has to be made available.
- Adequate ventilation for fresh air entry and hot air exit for the D. G. set has to be made available.
- All around space of 3 feet should be maintained.