INNOVA DIESEL GENERATORS PVT. LIMITED
Authorised Generator Original Equipment Manufacturer
AN ISO 9001 : 2008 CERTIFIED COMPANY

powerol by Mahindra

TECHNICAL SPECIFICATIONS FOR 50 KVA TO 82.5 KVA, 4 CYLINDER MAHINDRA POWEROL DIESEL GENERATOR SET PACKAGED BY INNOVA DIESEL GENERATORS PVT. LIMITED

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 Turbo charged / Turbo charged after-cooled engine rated at 1500 RPM, 12 VOLTS 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 filters
- 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 supply at 415 V, 50 Hz, 0.8 Pf (lag) @ 1500 RPM with ±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
- Exhaust driven turbo charger

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	50 – 82.5 KVA		
1	No. of cylinders	4		
2	Engine Model	4725 GMC2	4905 GMC2	41035 GMC2
3	Bore x Stroke (in mm)	94 X 115	96 X 122	96 X 115
4	Displacement (in cc)	3192	3532	3530
5	Aspiration	Turbo charged Inter Cooled		
6	Compression ratio	18.4+/-0.5 : 1	19.5+/-0.5 :1	16+/-0.5 : 1
7	Firing Order	1-3-4-2		
8	Rotation	Anti-clock wise when viewed from fly wheel end		
9	Cooling System	Liquid Cooled type		
10	Lube oil grade to be used	CI4 15 W 40		

BATTERY:

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

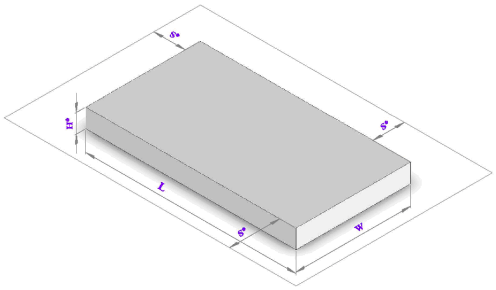
FUEL TANK:

Integral / Sub-base fuel tank for 8 hours operation

FUEL TANK CAPACITY	
KVA	No. of Ltrs.
50	100
62.5 - 82.5	150

DG SET FOUNDATION PLATFORM REQUIRED:

DG SET Rating in KVA	Length x Width x Height L X W X H (IN mm)
50	2800 x 1330 x 150
62.5 – 82.5	3100 x 1450 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:

- MCCB (3 Pole) with over load and short circuit protection
- **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

MCCB RATING	
KVA	Amps
50 - 62.5	100
75 - 82.5	125

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.