

SPECIFICATIONS OF 100 KVA SILENT DIESEL GENERATOR SET

100 KVA Silent Diesel Generator Set:-

- A.** Supply, Installation, Testing & Commissioning of Silent DG Set complete with 1500 RPM Diesel Engine of suitable BHP & AC Brush less SPDP Alternator mounted on a common base Frame & coupled through a flexible coupling or close coupled. Alternator shall be self regulated with standard Alternator Protection(Over voltage , over speed & under voltage, under speed warning & shutdown). Engine shall have residential silencer, up to 3 M exhaust piping , electronic / Mechanical governor, Manual & electric Start ,Batteries, Engine instruments panel, AVM and with Weatherproof, powder coated Accoustic enclosure for DG set for sound attenuation fabricated from 1.6 to 2.0 mm CRCA sheet steel (structure) with side wall fabricated from 1.6 to 2.0 mm CRCA sheet & filled with 100mm thick glass wool(96Kg/m³)/ Foam. as per IS 8183 the doors of 100 mm thick and fabricated from 1.6mm CRCA sheet packed with accoustic material, canopy fixed with axial flow fan , All doors/ opening are sealed with neoprene/EPDN gaskets. The enclosure has built in fuel tank, residential silencer (isolated from main DG chamber) with protection and tripping of DG set
- B.** Against temperature of more than 50 degree centigrade. All controls for operation of DG set are from outside the enclosure with DG control panel having Microprocessor based Genset monitoring & control system, MCCB, Ammeter, Voltmeter, PF meter, frequency meter, KWH meter, Ind.lamps etc. mounted inside enclosure , visible and accessible from outside. The enclosure should be suitable for following capacity DG sets and alternator. Noise level shall be less than 75 dBA at a distance of 1 Mtrs. duly certified by authorised agency etc. complete in all respect of following capacity.
- C. Radiator Cooled & Turbo Charged /AC 100 KVA at 0.8 pf 415V 50Hz 3-ø**
- D.** SITC of Auto main failure (AMF) Panel fabricated from CRCA sheet steel 2 mm Thick , Powder coated finish , Engine Start & Stop commands, control Relays , selector switches for Ammeter & Voltmeter, Ammeter & Voltmeter , Control & Power Contactors, Timers, Electronic Hooter , Visual & Alarm indication for faults, UPS, operator interface panel complete in all respect suitable for following capacity DG sets:
- E. PLC /Relay Based: 100 KVA**
- F.** S/F of DG Set Exhaust Piping insulation on 80 mm to 150 mm Dia. MS Exhaust Pipe
- G.** Asbestos rope insulation
- H.** Rock /Glass wool with 22 g Aluminium cladding (Density- 96 kg/m³, Thickness-50 mm)
- I.** Construction of Plateform of Size 3600 x 1800 x 600 mm including earth work ,150 mm thick concreting under masonry wall and C.C. floor , 30 mm thick masonry wall as required as per site condition and 75 mm thick C.C. floor, outer face of wall should be finished with 20 mm thick cement plaster complete with all respect
- J.** Plate Earthing as per IS:3043 with copper Earth plate of size 600mm x 600mm x 3.0mm by embodying 3 to 4 mtr. below the ground level with 25 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer, nipple ,wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required. **2 Nos.**
- K.** Maintenance free Gel Earthing with Pipe in pipe / Pipe in strip technology filled with anti corrosive conductive compound (CPRI Tested) below the ground in 150 - 200 mm dia. earth pit & surrounding filled with required mineral filling compound (MFC should have hygroscopic property to retain the moisture for long time to create low resistance zone) and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete testing of earth resistance as required. of following sizes. **2 Nos.**

L. With Strip in Pipe Technology with 80 - 100 micron GI Coating

M. GI pipe 2000 mm long ,63 / 80mm, Inner strip 50 mm x 3 mm copper

N. S & Laying following size earth wire/strip in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, making connection etc. as required. 20mm x 3mm copper strip. 40 mts

O. P/Laying P.V.C. / XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor of IS:1554 P-I / IS :7098 P - I of Group 1 of approved make . The cables laid on surface by means of screws,rag bolts,MSU clamps,as per approved spacing. **150.0 Sq.mm 3.5 core (armoured). 40 mts/**

P&F on load change over switch, front handle operated, four pole 415 V conforming to IS:13947 P-III including connections , testing etc. as required in the following rating:With sheet steel enclosure: 200 A

150.0 Sq mm 3.5 Core Armoured Cable / meter

(If requires more than 40 mts.)

1. Connection with the existing electrical panel shall be done by the Firm.
2. For which test certificate shall be produced from govt. approved agency.
3. Bidder should Quote rates including installation work in all respect
4. The DG should comply with CPCB/RPCB emission norms.
5. Onsite maintenance of the whole work/product shall be 5 years from Completion of guarantee (CMC)
6. Complete work shall be carried out by the manufacturer.
7. Guarantee shall be given by principal manufacturer/authorized dealer/executing agency of the product and allied installation work for the period of 2 years from the date of installation. Bidder should mention guarantee/Service provider.
8. During Guarantee and onsite maintenance period consumables like all kind of filters, Engine oil, coolant , fan belt, washers, diesel, distilled water for batteries and hose pipes will be provided by the department as and when required also quarterly inspection and two services/year will be will be provided by the manufacturer free of cost..
9. Pre-Dispatch and Post Installation Inspection may be done by RMSC.

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