

BRIEF SPECIFICATIONS OF DIESEL GENERATOR SETS

S.No.	ITEM DESCRIPTION	SPECIFICATION
1.0	Quantity and Rating at prime duty	1 x50 KVA provision at 0.8 PF (Unit shall be rated for feeding prime load).
2.0	Mode of Operation	Independent operation of D.G. sets - Auto start
3.0	<u>Engine/ Alternator:</u>	
3.1	Output rating at ambient temp of 50 Deg. C (for each) at prime duty	1 x 50 KVA provision at 0.8 PF – continuous for prime load.
3.2	Class of insulation for Stator & Rotor (For calculation & testing)	Class 'H' limited to class 'F'.
3.3	Rated voltage & Frequency	415 Volts, 50 Hz. three phase, 4 wire A.C.
3.4	Maximum permissible time for building up rate and voltage from stand still	Less than 5 seconds
3.5	Variation of voltage from no load to full load	$\pm 1\%$ of rated voltage
3.6	Voltage variation	$\pm 1\%$
3.7	Capacity of largest motor load	415 Volts,.....KW, motor starting with base load of 20 % loaded (suitable for 0.8 pf)
3.8	Dynamic voltage response & permissible voltage drop at generator terminals during largest rating motor starting	Less than 15% of rated voltage under operating conditions at 3.6 & 3.7 above.
3.9	Temperature detectors with scanner/ converter	8 Nos. resistance temperature detectors of type PT-100 for winding temperature and bearing temperature measurements.
3.10	Type of excitation system	PMG type/ Auxiliary plus relating field diode.
3.11	Type of control for voltage regulator	(Dual) Local/Remote (Manual/Automatic)
4	Miscellaneous	
4.1	Type of fuel for engine	High-speed diesel in accordance with F-DMA or F-DMS as per ISO 8217. (IS: 1460 1974 amended up to date)
4.2	Day Oil tank capacity	990 liters each
4.3	Maximum permissible starting time for attaining full speed	Less than 2 seconds
4.4	Engine Starting	Electric starting system
4.5	Type of Governor	Electronic fuel controlled with mechanical over-speed protection complete with solid-state potentiometer for remote operation.
4.6	Lubrication system	Pressure fed type.
4.7	Cooling System	Engine mounted radiators with shaft driven fan (not motor drive)
4.8	Engine cranking system	To be included
4.9	Noise Level	75 dbA at 1 meter
4.1	Vibration limit	Less than 250 micron

END OF SECTION