SPECIFICATION OF DAIRY EQUIPMENTS AND ACCESSARIES

1. DIESEL GENARATOR TECHNICAL SPECIFICATION OF D.G.SET

Sl. No.	Description	Specifications Required
1.	General Operating and Design conditions	The DG set shall be of capacity: • 25 KVA three phase, air or water cooled for 5 KL BMC The DG set should be heavy duty design, industrial type, rated for continuous operation for the refrigeration system, milk tank agitator & milk dispatch pump, hot water geyser (approx. 2,0 kW), AMCU, Lightings, Ceiling fan. The diesel engine and alternator should be mounted on specially designed combination base plate and MS structure of extremely rigid fabrication. The base frame should be suitable for mounting the set on AVM pads over the foundation.
2.	Confirmation to regulatory norms for environment and Approval from Local authorities	• DG set should carry a valid approval certificate issued as per CPCB norms complying with the provision of the Environment (Protection) second Amendment Rules 2002, vide notification no G. S. R. 371 (E), dated 17th May 2002& amended by GSR 448 (E) dt.12/07/2004. • Also compliant with new **CPCB IV** norms applicable from June, 2024. • The exhaust pipe with exhaust muffler with insertion loss of minimum 25 dB (A) is connected to the exhaust manifold preferably with flexible bellows. • In case the DG Set is located within the BMC building, the exhaust pipe with insulation & cladding of adequate length be provided extending the original pipe over the roof of the building to avoid pollution in and around the location. • Supplier to obtain the approval of Local authorities in case it is required by the rules.
3.	Diesel Engine	The diesel engine should be suitable for Power Generation application type air or water cooled and capable of developing required BHP when running at 1500 rpm under NTP conditions. • The engine should be built to IS 10000/ISO 3046/BS 5514/649 and rated for continuous running of 24 hours with an overload capacity of 10 % for a period not exceeding 1 hour in any 12 hours running. Diesel engine up to 20 kW should have valid BIS license and certificate clearly mentioning use for 'General purpose application as per IS 10001 norms. • Engine ratings should be for operation at full load condition and should be suitable to take 100% block load. • Self-starting arrangement with 12V suitable rated heavy-duty Lead Acid accumulator type battery with Solid-state battery charging arrangement and cables. • Standard set of tools. First fill of Lubricating oil, First fill of coolant, Lubricating oil pressure & temp. gauge, • Standard set of tools. First fill of Lubricating oil, first fill of coolant, Lubricating oil pressure & temp. gauge, • Control panel for engine with engine safety temperature, V-belt failure, low lub oil pressure, low water level in radiator auxiliary failure, air cleaner choke indicator. • Steel Diesel Storage barrel of 200 lit capacity with manual pump

4.	Engine Instrument Panel (Mechanical and/or electronic gauges)	Consist of Ignition key, Starting push button, Lubricating oil pressure gauge, Temperature gauge for cooling water, Temperature gauge for lubricating oil, RPM meter (Analog type), Battery charging ammeter
5.	Control Panel	The diesel generating set to have suitable control panel duly prewired with the following instruments: One ammeter with selector switch, One energy meter with selector switch, Hour meter, One suitable capacity MCCB with overload and short circuit protection to disconnect power supply in case load of generating set increases beyond permitted limits. The rupturing capacity of the MCCB should not be less than 25 kA. One set of indicating lamps and control fuses.
6.	Alternator	The engine should be closely / flexible coupled to suitable Self excited, self regulated (through an AVR) alternator developing required KVA at 0.8 power factor,1 phase/3 phase, 50 cycle/sec, 230 volts AC power supply under NTP conditions when running at 1500 RPM. The alternator should be brushless type, screen protected and fitted with end shield and ball roller bearings. The alternator shall have 'H' class of insulation. It shall conform to IS13364 (Part 1) 1992 up to 20 KVA, IS 13364 (part II) 1992 or IS 4722 of 1992 above 20 KVA.