

Specification of Refrigeration Van For Vaccine Transfer

S.N	Parameter	Specification	Rmks
1	Type	Refrigeration van for Transferring Vaccine Suitable for driving in Nepal at an altitude upto 2500 and in ambient temperature -5 to 50 degree centigrade	
2	Engine	Type	Turbo Charged Diesel Engine
		CC	Minimum 2500 cc
		Torque	Minimum 200 Nm @ rated rpm
		Power	Minimum 55 Kw @rated rpm
3	Emission	Must Comply Nepal vehicle mass emission Standard	
4	Transmission	Manual, with Min 5 forward and 1 rear gear system	
5	Tyres	Standard with spare in the vehicle	
6	Steering	Power	
7	Payload	Minimum 1000 kg	
8	Seating Capacity	Minimum 2 persons	
9	Ground Clearance	Minimum 180 mm	
10	Drive	Right Hand Side	
Refrigeration Container			
11	Structure	Capacity	Minimum 8 cu m
		Construction type	Heavy Structure pre fabricated jointless GRP (Glass fiber reinforce plastic)
		Floor	Must be covered with non slip perforated mat of minimum 20 mm thickness
		Features	Bacterial Resistant interior wall
			Refrigeration unit with DG set must be supported on outer enclosure , properly reinforced with adequate protection of the unit from the natural elements
Insulation	PUF insulation Thermal conductivity ≤ 0.3 watt/m ² deg C		
12	Temperature	Range	The refrigeration unit must maintain the interior of the insulated body/vaccine storage compartment at a temperature between +2 deg C to +8 deg C at any point with full load or no load of vaccine.
		Gradient	Temperature gradient should not be 2 deg c at any two points in vaccine compartment.
		Features	Provision of instantaneous temperature display of the container at the dashboard of the vehicle

13	Refrigeration Unit	Power source	Vehicle engine, Diesel Generator (DG) and Electricity An inbuilt DG set running on single phase power supply integrated with refrigeration system should be provided with a by pass arrangement for the motor engine	
		Refrigerant	Must be CFC and HCFC free .	
		Features	automatic startup and shutdown mechanism through electronic temperature control unit	
			A standby electric motor should be provided to drive the compressor of the refrigeration unit. An extension lead of 20 m suitable core cable should be provided .	
Control unit	A digital, programmable controller should allow auto and manual control of temperature control and defrost feature.			
14	Test Certificate required	Certificates of air tightness test and heat leakage test of the container should be provided.		
15	Tools and accessories	Fog light Standard tool kit with hydraulic jack, wheel spanner, lever etc		
16	Training	Training for the operation and general maintenance of the refrigeration unit should be provided.		
17	Warranty	Minimum 2 years for vehicle and refrigeration unit		
18	Documentation	User (Operating) manual in English		
		Service (Technical / Maintenance) manual in English		